SPATIAL MISFITS IN MULLITLEVEL GOVERNANCE IMPACTS ON THE SMALL ISLAND STATE OF MALTA

Julia R. Kotzebue

UNIVERSITY OF TWENTE.

SPATIAL MISFITS IN MULTILEVEL GOVERNANCE - IMPACTS ON THE SMALL ISLAND STATE OF MALTA

DISSERTATION

to obtain
the degree of doctor at the University of Twente,
on the authority of the rector magnificus,
prof.dr. H. Brinksma,
on account of the decision of the graduation committee,
to be publicly defended
on Thursday 28th of June 2012 at 12.45 hours

by

Julia Roberta Kotzebue
Born on the 20th of May 1975,
in Berlin, Germany

This thesis is approved by:
Promotor: prof.dr. J.Th.A. Bressers
Promotor: prof.dr. L.J. O'Toole

Members of the Committee:

Chair:	Prof.dr R.A. Wessel	University of Twente
Secretary:	Prof.dr. R.A. Wessel	University of Twente
Promotor:	Prof.dr. J.Th.A. Bressers	UT/MB-CSTM
Promotor:	Prof.dr. L.J. O'Toole Jr.	University of Georgia (USA) Department of Public Administration & Policy, School of Public & International Affairs
Member:	Prof.dr.ing. P. Y. Georgiadou	University of Twente
Member:	Prof.mr. dr. A.J.P.Brack	University of Twente
Member:	Prof.dr. M. Weissenbacher	University of Malta Institute for Sustainable Energy

Colofon

ISBN 978-90-365-3388-1
DOI 10.3990/1.9789036533881

Content

List of Tables

List of Figures

Acknowledgements

I first became interested in Malta's environmental policy, land use planning, and policy implementation in 2003. At that time, I was mainly interested in the transposition of, European environmental law. During my internship and research for my Master Thesis in Malta, I realized that the application of the EU law is not a problem for Malta, but that implementation and enforcement are. Several journalists and scientists I personally met and became friends with in Malta encouraged me to start this PhD project. In particular, I would like to thank Cyrus Vakili-Zad for his support.

This study could not have been completed without the help of CSTM – the Twente Centre for Studies in Technology and Sustainable Development at the University of Twente. It is very important to me to deeply thank my promoter Hans Bressers. He invested more than his working time in the project, sharing his knowledge and experiences to improve the study. Moreover, he really believed in the project from the first time I proposed it and looked for funding. Often it was his confidence in the project that encouraged me to work harder when the research was difficult. I am also very grateful to Larry O'Toole, my co-promoter, who understood my way of thinking and supported me with very practical and fruitful advice, enhancing the quality of the study.

I also would like to thank my colleagues, especially Frans Coenen, the department head at CSTM. I really appreciated the teamwork in the Gfors Governance for Sustainability Project. I am grateful that he organized the work in such a way that I was able to work as a junior researcher at CSTM and to complete this study. Special thanks also go to my colleague Maarten Arentsen, the SAUCE- Schools at University for Climate and Energy-project showed me that scientific work can be playful and fun, even for children. The project and the teamwork enabled me to combine my skills as a mother with scientific work. Furthermore, I would like to express my appreciation to Ada Krooshoop and Monique Zuithof-Otten for all the support as well as to Johannes Boshuizen and Menno Smit, my roommates, for the interesting conversations, and Maya van den Berg who always warmly welcomed me into her house. My job as a junior researcher made my time at CSTM diverse, very interesting, exciting, and joyful.

This work could not have been carried out without the interviewees who had the courage to speak freely about policy implementation processes in Malta, who provided me information and encouraged me to continue and to finish the study. *Grazzi Hafna*.

Finally I would like to express my gratitude to my friends and family. Jigan, without you, I sometimes would have been unable to understand the Maltese way of thinking and acting, and I sometimes would have been unable to express myself. *Babu und Opa danke für Eure selbstverständliche Unterstützung, Lisa fürs kritische Denken und Ammi und Janni fürs Durchsetzungsvermögen. Van harte dank aan mijn Nederlandse familie.* Last but not least, thank you, Florian and Marcia for reminding me every day about the value and joy of life.

Chapter 1

Introduction

1.1 Introduction

This study investigates the phenomenon of spatial misfits in multilevel governance policy implementation processes in Malta. Spatial misfit is defined as the incongruence of the implementing policies, with the boundaries, the nature, the important functions as well as the cultural and other values of a place, which makes the measures inapt and/or inapplicable. The analysis focuses on the implementation of large-scale policy in three EU policy sectors, and its spatial impact on the small-scale local ground. The research provides insights from Malta's multilevel governance structure, the interaction of key actors in the policy implementation, and the potential effects on the place of implementation. This first chapter outlines the background to the problem and introduces Malta as the place of policy implementation.

Background

EU policy is drawn up for all member states. The EU27 member states are very different from each other, including size, geographic location, economy, culture, and policies. As such the EU policy reflects a consensus of the member states about certain issues and does not take into consideration all the peculiarities of all the different places in the EU. Accordingly, the large-scale EU policy can be considered as "placeless" as it is homogenized, without taking the diversity of places into account (Duncan, 2000; Relph, 1976). The differences between the EU member states and the placeless EU policy is not a problem for the transposition of EU law. Malta has, as with the other EU member states, around 99 per cent of the EU law transposed into its national law (Eurostat, 2011b). Nevertheless, the enforcement and the practical implementation of the policy are often problematic. For instance, Malta's energy generation still depends almost 100 per cent on fossil fuels even though Malta supports renewable energy sources in its law.

To achieve a more balanced economic and social development, EU policy aims to eliminate development disparities among member states and to promote overall sustainable development (EUcom, 2010). In 1986, economic and social cohesion became subject to the EU law through the Single Act. In general, cohesion is defined as an action to form a unit. In physics it means "sticking parts that have the same substance" (OUP, 2012). The EU member states agreed, in Article 130a, to "… promote its overall harmonious development, the Community shall develop and pursue its actions leading to the strengthening of its economic and social cohesion. In particular the Community shall aim at reducing disparities between the various regions and the backwardness of the least-favoured regions." (EU, 1986). To achieve that goal, and to make the member states comparable, regions in the EU were redefined according to economic and social criteria, their gross domestic product (GDP) and unemployment

rate, rather than using, functional, cultural, and natural criteria of the regional geography (Casellas & Galley, 1999; Keating, 1997; Paasi, 2002).

In order to strengthen the position of regions at the periphery of the EU, the geographical aspect in the EU cohesion policy was emphasised and territorial cohesion became an objective of the policy (EC, 2002). The geographic position of member states and regions was linked to economic and social development. It is not clear what territorial cohesion exactly means, but it aims to create greater coherency between the EU sectoral policy and the regional policy (Faludi, 2006). The EU cohesion policy financially supports member states and regions whose per capita gross domestic product (GDP) is less than 75% of the EU's average (EUcom, 2006). The EU cohesion policy also financially supports projects which otherwise would have been regarded as economically unprofitable. However, similar to the economic and social cohesion, the policy is not guided towards the peculiarity of places, their nature, functions and values, but mainly towards economic development.

What does this mean to the member states that have to implement the "placeless" EU policy aiming at unity? The large-scale European policy and law set standards for the EU member states and guides national policies towards these standards. However, the exercise of powers in the EU is regulated through the principle of subsidiarity. The principle implies that, as far as possible, decisions and actions must be taken by the member states at the central, regional and local level (EC, 2002). In practice this means that the large-scale cohesion policy must be implemented through several actors in the member states. Nevertheless, member states are committed to promote cohesion, and in order to obtain EU funding they are obliged to fulfil the objectives of EU policy.

Although, the large-scale EU policy does not take all the peculiarities of every locality into account, and is not tailor-made for the place of implementation, in some cases the EU policy and law seems to be so powerful that the national governments implement policies without major adaptations. The policy then fulfils the criteria of the large-scale EU policy, but is not harmonized with the local characteristics of the place where it has to be implemented. Such developments can have potentially significant adverse impacts on the nature of the place, or replace functions and eliminate values that people bestow on the place, as well as changing clearly defined boundaries of a place. Thus the policy creates spatial misfits with the characteristics of the place. When this happens, the policy is considered as inapt and/or inapplicable for the place where it is intended to be implemented.

One could question what the problem is with an EU policy which spatially misfits at the local level. Although a policy is possibly inapt for the place, it can still be implemented when enough force is used to overcome resistance, or resistance fails to really develop. Nevertheless, this kind of policy is unbalanced with regard to social and environmental interests, and leads to unsustainable development. In other words, a large-scale EU policy can aim to promote sustainable development within the EU, but the implementation of non-tailor-made projects at national and local scales which spatially misfit lead to unsustainable developments. In the event of a potential spatial misfit of an EU policy, the policy can be, but is not always, opposed by national and local actors. Spatial misfits require a harmonization of the policy and place characteristics. Nevertheless opposition is often misunderstood as a block on the entire policy. Instead of harmonizing of the policy, projects are stopped or enforced against

the will of the opposition. Thus, a low implementation of EU policy could be an effect of spatial misfits.

Many policies that have a negative impact on a locality, face local opposition, which is often viewed as NIMBY (Not-In-My-Back-Yard) Syndrome or NIMBYism. The definition of NIMBYism is not clear. The phenomenon is usually linked to the opposition of local residents and neighbourhoods to unpopular, unwanted public infrastructural developments and service facilities that are socially necessary but carry negative connotations (Dear, 1992; Devine-Wright, 2005; Pol et al., 2006). Others understand the phenomenon as a social dilemma or a game theory situation, in which actors try to maximise their own or the group's utility interests and oppose projects which do not fulfil their utility expectations (Wolsink, 2000). The various definitions and explanations have one thing in common, the opposition is grounded in personal and self-interests of locals and residents - for instance, the loss of identity, the threat to well-being and property value, the loss of quality of life as well as injustice (why us and not others).

The reactions to spatial misfits in EU policy implementation are more complex. First, not only locals and residents react, but also governmental and non-governmental implementing actors. Second, the reasons are not personal selfish interests, but perhaps, significant national and international environmental concerns, the threat to national and local identity, the loss of national and local values, the replacement of functions, or the displacement of boundaries which organize the community. Thus understanding the characteristics of the place helps to understand the actions and reactions of policy implementing actors.

The phenomenon of misfits is well described and analysed in the Europeanization literature. In this context, a misfit is recognized as the incompatibility of European and national institutions and policy processes (Börzel & Risse, 2000; Bulmer & Burch, 2005; Knill, 1998). Misfits of institutions are also investigated in the environmental policy literature that describes a misfit as the mismatch of institutions and properties of the ecosystem and also as the conflicting spatiotemporal scales of institutions and ecosystems (Borowski et al., 2008; Cash et al., 2006; Wilson et al., 1999; Young, 2003). However this kind of misfit mainly reflects social aspects. The geographical aspects of EU policy implementation are given less prominence, even though possible spatial misfits and spatial impact of the EU policy are immediately visible when it is planned, or implemented, on national or local levels (Figure 1). These physical impacts of the European policy affect the place of implementation.

To identify spatial misfits in the multilevel implementation process and their origins, five cases in Malta, in three EU policy sectors, will be analysed in this study. Malta is the EU's smallest member state in both population and size. It is located in the centre of the Mediterranean Sea, approximately 93 km south of Sicily, Italy and 290 km from the North African mainland. The archipelago consists of three main islands, Malta, Gozo and Comino, with a total area of 316 square kilometres (Eurostat, 2012b). Luxembourg, the second smallest country of the EU, is huge compared to Malta, almost eight times larger. Further Luxembourg is not located at the periphery of Europe and is not isolated from the European mainland. Even though Malta has the smallest population in the EU, it has the highest population density, with around 1,300 people per square km. Compared to the Netherlands, which had the highest population density

Figure 1. Visible example of EU policy implementation at the local level
(Source: European Commission, Regional policy)

before Malta's accession to the EU, Malta's density is roughly three times higher (Eurostat, 2011a).

The only member state of the EU which shows similarities to Malta is Cyprus. Both are small island states, have a colonial history, and joined the EU in 2004. However, compared to Malta, Cyprus is huge at approximately 9,250 square km, and the population density is lower, at 87 people per square km. Territorial size is decisive. For instance, economically, Cyprus has natural resources and has a successful export industry so that income does not mainly depend on tourism as it does in Malta (Eurostat, 2011a, 2012a). These conditions make Cyprus much less vulnerable. Moreover, the separation of Cyprus into the Cypriot South and the Turkish-controlled area in the North creates special foreign and domestic political situations.

The reasons for investigating cases in Malta are as following: First, Malta only joined the European Union in 2004. The EU policy is, therefore, more top-down than, for example, in the six founding members and the three countries which joined in the 1970s. Malta has to "catch up" with EU standards and has to implement existing policies which it has not influenced.

Second, Malta does not only need to implement EU policies, it has also had to introduce administrative levels. The local level was only set up in 1993, three years after Malta's first application to join the EU. Before, the only recognised level of governance was the national government and parliament. Due to Malta's size, before the creation of the local levels, people directly contacted members of parliament or other political officials in their town or village. The enforced set up of local governments resulted in an unusually high number of local councils with the island divided into 68 local councils. As such, Malta has very little experience with multi-level governance. Thus, the idea of the subsidiarity principle only became relevant to Malta through EU accession. Furthermore, the "filter" that buffers between the EU policy and local implementation is weaker than in other bigger EU member states.

Third, Malta's democracy is very young because of more than 400 years history of occupation and colonialism. Malta became independent in 1964 but, remained heavily economically dependent on Great Britain until 1979, when the British military presence was finally removed (King, 1979). Malta's political landscape is very partisan and political loyalties are strong (Boissevain, 1964; Briguglio, 2009). Due to Malta's history and limited resources, the national government has always accepted and needed expertise and support from outside to solve national problems (Warrington, 1998). Hence, it is likely that the government will accept and implement large-scale EU policy without major changes and adjustments, which increases the likelihood of spatial misfits.

Finally, many Maltese people, and the national government, usually perceive EU policies as modern because many European standards are higher than the Maltese ones (Mitchell, 1998). This attitude stimulates the government to adjust Maltese standards to EU standards. Hence, it is expected that the government will strive to reach the standard by reproducing EU policies, increasing the likelihood of spatial misfits. Accordingly, it is argued that the likelihood of spatial misfits in Malta is very high. If spatial misfits are not found in Malta then it is unlikely that they will be found in other EU member states with less extreme conditions. Likewise, even when such misfits in Malta can be more attributed to domestic policy process impacts than to the EU policies per se, it is likely that this would be even more the case in other EU countries.

1.2 The research questions

The main aim of the research is to clarify and to explain why large-scale EU policies are implemented at the local level in such a way that the potential impact of the projects leads to spatial misfits with the place. As such, two questions are central to this study: *to what extent do the EU policies spatially misfit with the place of implementation in Malta; and to what extent do the spatial misfits originate from the common European policies as against from Malta's national multi-actor interaction implementation process?*

The first question aims to clarify whether the large-scale EU policy, which does not take into account local peculiarities, fits with the place of implementation and whether it is applicable. For instance, an assumption in the Europeanization literature is that EU rules and regulations are sometimes incompatible with national policy (Cowles et al., 2001). A similar assumption is found in the social-ecological resilience literature, e.g. scale mismatches are understood to be a result of increasing governance levels and bureaucracy (Cumming et al., 2006). These assumptions include an incompatibility of higher level policy with lower level policy, and that it is the higher level policy that causes the misfits. Hence, the second question aims to clarify whether the higher level policy is the cause of spatial misfits. The questions are relevant because the answers can direct further attention to improving of the future national and local policies, or towards a greater sensitivity of EU policy for spatial differentiation in Malta, or towards better guidance of national, regional and local policy implementation processes.

1.3 Malta as a magnifying glass

"In a small island, where the impact of development on land is strongly felt, where rural areas enhance the characteristic beauty of the Maltese environment, where the sea and its produce are an intrinsic part of life, the integrated coordination of agriculture and fisheries production, rural and environment is a tremendous responsibility. All the more so, in the context of the environmental and agriculture European Union Acquis. The Ministry has been entrusted with spearheading that which is essential for our quality of life" (Mission statement of the former Ministry for Rural Affairs and the Environment, 2008).

In this study, Malta is used as a sort of magnifying glass, to make the impact of the "placeless" large-scale EU policy on the small-scale local place readily apparent. The above mission statement of the former Ministry for Rural Affairs and the Environment, points out a crucial aspect: in Malta every impact of development is strongly felt. This part of the statement can be understood from various perspectives.

One perspective is that of the development of democratic structures in Malta. Malta was under direct British rule from 1800 to 1964, and only became a republic in 1974 (King, 1979). This means that Malta has only 38 years of experience with democracy. Malta's government knows no coalition dynamics and the political spectrum is divided between just two parties, the Nationalist Party and the Labour Party. Malta's small size, single transferable vote system and the "majority rule" provision always create election results that guarantee an absolute majority to one of the two parties, although the election system in bigger countries allows multiple parties. Under the single transferable vote system every vote counts. In the event that the voter's first choice candidate has been elected or eliminated, the voter's vote is transferred to the second preferred candidate and the procedure repeats itself again (Remo, 1990). Due to Malta's small size and the importance of personal contacts, political patronage is deeply rooted in Maltese society. Political actors try to mobilize people through personal appeals, and appeals to the family, as well as with direct material or immaterial incentives (Hirczy, 1995).

The personalization of elections and the ensured majority of one party blurred the distinction between government and the party in power. Government officials are recruited or discharged according to their party loyalty (Gretchen, 2003; Pirotta, 1997). Hence stability and policy continuity depends on the reelection of one of the two parties. Through EU accession, the two party duopoly has been softened. For example, Alternattiva Demokratika, the green party, has gained influence in Malta through its strong showing in the 2004 European Parliament election. Additionally, the government has started to reform public service aiming for more transparency and efficiency. To strengthen the capacities of ministries, party loyalty is no longer the highest criterion for recruitment (Cassar & Bezzina, 2005).

Another perspective considers the development of multilevel governance. Despite its size, Malta is divided into 68 local councils (Figure 2). The local councils were created according to the European Charter of Local Self-Government of the European Council in 1993, three years after Malta's first application to join the EU. The charter recommends that local councils should "… regulate and manage a substantial share of public affairs under their own responsibility and in the interests of the local population",

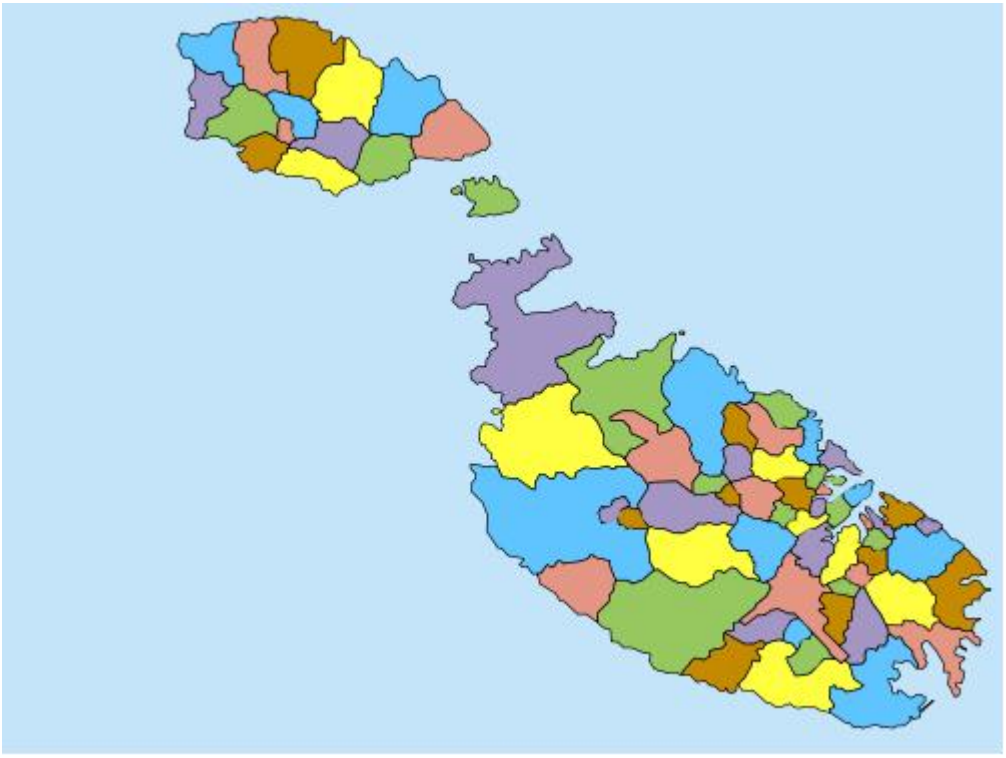

Figure 2. Local Councils

and that "local authorities shall be consulted, insofar as possible, in due time and in an appropriate way in the planning and decision-making processes for all matters which concern them directly" (EUcouncil, 1985). Although the councils have limited powers and responsibilities, and depend financially on the central government, their introduction created power-sharing in Malta. The Local Council Act entitles the local councils "to advise and, where applicable, be consulted by, any authority empowered to take any decisions directly or indirectly affecting the Council and the residents" (Gov, 1993). Since EU accession, The Local Council Act has been reviewed several times to promote greater power sharing. Nevertheless, local councils still fully rely on the national government to share information. Further the local councils are directly linked with the European level through the Committee of the Regions. However, given the small size of the local councils, the smallest is Isla (0.16 square km), many do not have the capacity, interest or experience to participate at the European level. Apart from the governmental aspect, non-governmental groups have become more powerful in Malta through direct links to the European level which created vertical power sharing.

Development can also be understood in terms of physical impacts. One of Malta's largest problems is land scarcity. Land development has been strictly regulated by development planning legislation since 1992 (Aquilina, 1999). Malta has no unused space and many places have several functions. Further, local land use competes with tourism and tourism-related developments. Tourism became one of the major sources of income after the end of the British presence in Malta. In 2002 approximately 1,133,000 tourists visited Malta (NSO, 2002). The tourists consume more land, water and energy resources than the local population (Zammit, 2009). Especially the large-scale hotel developments threaten the coast and countryside (Bill, 2003). Malta's small size results

in poor natural resources and little productive industry (Briguglio, 1995). The construction industry became another major industry in Malta, which led to rapid construction on the island and a decline in natural and agricultural areas (Meli, 1993). As such every development, small or large, in Malta is recognized and felt by the Maltese.

1.4 Structure of this study

The study is divided into six chapters. Following this brief introduction, the second chapter addresses the theoretical framework and the research methodology. Initially, the chapter introduces the concept of place as it is mainly used in the geography literature. From the literature review, four analytical dimensions of place have been extracted which are ascribed to a place: boundaries, functions, nature, and values. The chapter then defines the spatial misfit phenomenon and explains the concepts employed. Since the study is interested in spatial misfits in multilevel governance, the emphasis is on multilevel governance in the EU and the role of place in multilevel governance processes. Furthermore, the chapter details the three generations of implementation research, defining important variables of the implementation process. The basics of the Contextual Interaction Theory, which is used as the theoretical framework of analysis, are introduced and explained. The theoretical framework finishes by linking the place to the Contextual Interaction Theory and defining the relationship of place with the other variables of the theory. The second part of this chapter covers the methodology, describing the research design, data collection and analysis.

Chapters 3 to 5 are dedicated to the case studies. The first two case studies, examined in Chapter 3, are concerned with the Trans-European Transport Network (TEN-T) in Malta: the Manikata bypass (project VIII) and the Ghadira Bay upgrading (project X). Following a brief introduction to the general EU Trans-European Transport Network policy, and Malta's national policy, Manikata and Ghadira are described in terms of the place characteristics. Chapter 4 is dedicated to the implementation of Malta's renewable energy policy. As with Chapter 3, the chapter includes two case studies: the proposed wind farms at Sikka l-Bajda, and at Wied Rini L/O Bahrija. The chapter starts with an outline of Malta's renewable energy policy before and after EU accession. The outline details how Malta's renewable energy policy was pushed by the EU's policy of promoting renewable energy and its 2020 renewable energy target. Malta's national renewable policy stresses the importance of the wind farms which are examined using the place concept.

Chapter 5, investigates Malta's aquaculture policy. Unlike the other policy sectors, the chapter includes only one case study. The chapter analyses the implementation of Malta's aquaculture zone in the southeast. The introduction provides a brief overview of Malta's aquaculture policy before and after EU accession. Subsequently, the place of implementation and the policy implementation process will be analysed. Chapter 6, the book's final chapter, compares the number and types of spatial misfits found in the three sectors, and discusses EU, national and local level factors. The chapter concludes the study by considering the lessons learnt from emphasising place in analysing multilevel governance and the policy implementation process.

Chapter 2

The Theoretical Framework and Methodology

2.1 Introduction

This chapter introduces the key concepts that are used in this study and their relationships. As briefly explained in the introductory chapter, spatial misfits originate somewhere between the EU policy level and local policy implementation. As such it is crucial to understand what happens between the EU level and the local level. The distinction between the EU, national and local levels is both administrative and geographical (Brenner, 1999; Marston, 2000). For example, the levels can be understood in terms of scale (Howitt, 1998). Geographically small-scale is used to define locality and the local level (Massey, 1991). At the same time, the social relationships within a certain place in space also defines the locality (Anderson, 2010). Local policy implementation is an activity that takes place at a specific location (Paasi, 1991).

Place is a core concept in geography, stressing the geographical spatial aspects and social relations. Initially, Section 2.2 introduces the concept of place as primarily used in geography. The section details the social and geographical aspects of place which, for analytical reasons, are conveniently divided into four characteristics. However, place can only be fully understood by considering all the characteristics together and retaining completeness (Gieryn, 2000). Subsequently, the section considers 'place' in the context of policy processes and describes the phenomenon of a spatial misfit. The concept of a misfit is, seen in the Europeanization literature and describes, for instance, the compatibility of EU and national institutions (Cowles et al., 2001), and the incongruence of EU and national regulations (Kohler-Koch & Eising, 1999). This study does not use the concept of misfit as used in the implementation literature as this is limited to social process aspects.

Whereas the misfit concept as used in the Europeanization literature describes one specific aspect of European integration, multilevel governance is a more general approach to European integration (Jachtenfuchs, 2001). Sections 2.3 and 2.4 introduce the concept of multilevel governance. Political scientists have several understandings of multilevel governance in the EU, for instance a vertical allocation of competences (Benz & Zimmer, 2011), or a "set of non-hierarchical and regulatory institutions" characterised by a mix of governmental and nongovernmental actors (Hix, 1998), as having a negotiation system that blurs the distinction between the EU system and the national system (Jachtenfuchs, 2001). Multilevel governance approaches are often used to describe and investigate policy making, the integration of EU member states and the relationship between the EU and the member states (Kohler-Koch & Eising, 1999; Marks, Hooghe et al., 1996; Peters & Pierre, 2001).

EU policy implementation is not only the formal translation of EU law into national law, but also the practical application of EU measures at national and local level.

Nevertheless, much of the literature on the implementation of EU policy emphasises the national policy level (Haverland & Romeijn, 2007; Lampinen & Uusikylä, 1998). Furthermore, a systematic examination, using analytical frameworks of for example the implementation research literature, is often lacking. Section 2.5 outlines the three generations of implementation literature. Section 2.6 details the Contextual Interaction Theory, which is used in this study to systematise the analysis. According to this theory, the multilevel policy implementation process involves social interaction processes, influenced by the involved actors, their characteristics and the implementation context (Boer & Bressers, 2011; Bressers, 2009; Bressers et al., 2000). The second part of the chapter focusses on the methodology, explaining the study design, data collection and data analysis.

2.2 Place

Place becomes a place through people adding to natural space: values, functions, meanings and boundaries (Agnew, 2010; Agnew & Duncan, 1989; Sack, 2001). Emphasising the geographical aspect, place is located somewhere. Emphasising the social aspect, place needs an identification by people (Gieryn, 2000). From the place literature, it can be concluded that place can be defined by at least four characteristics: boundaries, functions, nature, and values. These four characteristics are useful conceptual distinctions which enable one to analyse the relevance of place in the policy implementation process without overlooking relevant issues of the place.

Place in the policy implementation process has two particular meanings and can be considered as both a dependent and an independent variable. First, the place creates a physical and spatial intervention area for a process. The concept of place functions as an instrument to delimit and control a certain unit of space (Agnew & Duncan, 1989; Sack, 1997). Outputs of the policy implementation process often influence, create and reshape places according to policy goals and intentions. In that sense, place is a dependent variable of the policy implementation process. Second, place influences the policy implementation process and outputs. The characteristics of a place, its boundaries, nature, functions and values can constrain or enable the policy process. Therefore, place is also an independent variable of the policy process.

Place is thus dynamic, and the four characteristics are interactive. The boundaries of a place are socially and geographically determined. Boundaries are delimiting spatial units (Johnston et al., 2000). Social boundaries, or human spatial boundaries, are to an extent constructed by institutions. Institutionalists use several definitions of institutions but, according to much of the social science literature, institutions comprise social structure as well as repetitive rules and practices that shape and organize social behaviour and social relationships. Institutions determine permitted, forbidden and requested rules and practices. Although many institutions are based on written, formal and legal rules, not all rules and practice demonstrate this characteristic. It is important that rules and practices are generally accepted (Jessop, 2008; Ostrom, 2005; Peters et al., 2008). Geographical boundaries are constructed by nature, such as rivers, oceans and mountains, and also by people for example filling in a river basin for land reclamation (Wolch & Dear, 1989). The characteristics of the place, the social and

geographical boundaries, mutually influence each other and are flexible, for instance a natural change in a river basin can influence agricultural uses of land and settlements.

The concepts defining nature are complex and often contradictory. The Oxford dictionary defines nature as "the phenomena of the physical world collectively, including plants, animals, the landscape, and other features and products of the earth, as opposed to humans or human creations"(OUP, 2012). This definition includes the landscape. However landscape can also be considered as place. It is often defined as an area of land, an objective area to be studied or a focal habitat (McGarigal & Marks, 1995). Thus landscape has a geographical and cultural aspect, reflecting the culture and aesthetic which is agreed upon (Cresswell, 1996). Nature, in the context of the place concept, can be understood as everything which is not made by humans: something given and a product of its own evolution (Smith, 2008; Soper, 2000). Nature can also be understood as everything which is unaltered by humans, or wild, or nature uncontrolled by humans (Nash, 1982). The concept of nature is not the same as the concept of ecosystems. Definitions of the ecosystem in the ecology literature vary, but ecologists generally recognize the ecosystem as a specific level of organization. Additionally, many ecologists regard the ecosystem as a study unit that is part of the natural world, differing in space and time from elsewhere. Depending on the definition of the ecosystem, humans may be part of the ecosystem (Brown et al., 2004; Odum, 1969; Rokeach, 2000). In this study, we will use the term nature to cover all biological, chemical and physical elements of a place which are not human nor made by humans.

The functions of a place depend on the human and natural activities of the place and the spatiotemporal scale. The greater the extent and the longer the time scale, the greater the functions of a place (Louw & Bruinsma, 2006). In a situation of multiple land use, several functions take place on the same spatial unit so that a place is used simultaneously and/or consecutively for certain functions over a certain period of time (Priemus, 2000b; Rodenburg, 2002). Human activities are manifold and far-reaching and almost all activities have direct or indirect influences on several places, including places in the sea and even in outer space.

The use of place as an analytical tool requires a classification of relevant functions. Land use classifications which are resource-oriented, referring only to the several types of land and only to human-dominant activity on land, are insufficient. The classification should be flexible and useful for the vast majority of places. Therefore, the proposed classification is related to more than human activities and comprises the activities which are related to housing and living, working, infrastructure, nature, culture and recreation, agriculture and farming as well as water (Anderson et al., 1976; Priemus, 2000a; Rodenburg & Nijkamp, 2002). Housing and living cover the functions which are related to residential housing. Working includes commercial and non-commercial activities and services such as business, shopping, industry as well as schools and hospitals. Infrastructure includes roads, rails, waterways, energy and water supply facilities. Culture and recreation relates to parks, funfairs, public pools, museums and churches. Agriculture and farming also include pasture. Finally, water includes natural and man-made seas, lakes and rivers. Apart from the human functions, a place has natural functions which depend on the physical components, the organisms of a place. Natural functions can be considered as related to the natural physical-chemical-biological processes.

Finally, place is characterized by values. Even though the literature on values presents no universal concepts of values, some elements seems to be vital. As such "values are (a) concepts or beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance" (Schwartz & Bilsky, 1987). Values are criteria for judgements, preferences and choices beyond immediate and specific objects towards an ultimate end-state of existence (Rokeach, 1972). Organizing the values helps to solve conflicts and to explain or justify past conduct (Williams, 2000). Most literature on values makes a distinction between values held by individuals and by the collective. Some authors here take a instrumentalist view: that values either serve an individual or a collective purpose (Schwartz & Bilsky, 1987).

Studies on environmental values have shown that an object can have a value without being instrumental for humans (O'Neill, 2003; Rolston, 2003). An alternative distinction therefore can be made according to the number of value holders. If the majority hold the same value, the value becomes a norm and a collective value. If only individuals hold a certain value, the value is an individual value (Hofstede, 2001). Nevertheless, collective values are not a concrete set of rules and therefore cannot be considered as institutions. Due to the number of values, many scholars have, for analytical reasons, classified values. For example, Hofstede distinguishes between three types of values according to the relationship 1) between people, 2) between people and things and nature, as well as 3) between the inner self and paranormal powers (God) (Hofstede, 2001). With regard to place, values of the second type are very important. These values reflect the experiences of people with things and nature that are rooted in, for example, naturalistic, aesthetic, utilitarian and economic ideas (Kellert, 2005). For example, Kellert proposes "biophila values", a classification which is limited to the relationship with nature. However, the classification can also be used for things produced by humans (Table 1).

Term	*Definition*	*Function*
Utilitarian	Practical and material exploitation of nature	Physical sustenance/security
Naturalistic	Satisfaction from direct experience/contact with nature	Curiosity, outdoor skills, mental/physical development
Ecologistic-Scientific	Systematic study of structure, function and relationship in nature	Knowledge, understanding, observational skills
Aesthetic	Physical appeal and beauty of nature	Inspiration, harmony, peace, security
Symbolic	Use of nature for metaphorical expression, language, expressive thought	Communication, mental development
Humanistic	Strong affection, emotional attachment, 'love' for nature	Group bonding, sharing, cooperation, companionship
Moralistic	Strong affinity, spiritual reverence, ethical concern for nature	Order and meaning in life, kinship and affiliational ties
Dominionistic	Mastery, physical control, dominance of nature	Mechanical skills, physical prowess, ability to subdue
Negativistic	Fear, aversion, alienation from nature	Security, protection, safety

Table 1. Basic ideas about nature, its orientation for values towards a place
(Source Kellert, 2005)

Having described the four characteristics of a place and their working definitions, one could assume that the characteristics appear separately. However, in reality, the characteristics are interwoven and mutually influence each other. The analytical distinction of characteristics should therefore only be regarded as a useful tool in studying the phenomenon of a spatial misfit: to avoid overlooking relevant issues of the place.

2.2.1. Spatial misfits

Spatial misfits are defined for the purpose of this study as incongruences of the implementing policies with the boundaries, the nature, the important functions as well as the cultural and other values of a place which makes the measures inapt and/or inapplicable.

Generally, the term misfit has two meanings. First it refers to a person who is unable to adapt or adjust to his or her circumstances. Second, it refers to an attribute of a person or a thing which neither matches or addresses the attributes or purposes of another person or thing. From these two meanings, we can derive that a spatial misfit occurs if the attributes or purpose of a policy do not address the attributes or purposes of a place. A spatial misfit also occurs if a policy cannot, or is not, adjusted to the specific circumstance where it has to be implemented.

The concept of (in)congruence has a central meaning in the spatial misfit definition. Semantic studies show that congruence in geography refers to at least two points that can be transformed into the other by, for example, translation, rotation and reflections. Figures are congruent if they are equal in shape and size but differ in position. Therefore, congruent has the meaning of similarity, but not equality, between objects. Moreover, in Latin, the term congruere means coming together or agreeing. Hence congruence refers also to the state of agreement and the achievement of coming together (Eckstein, 1997). With regard to our misfit concept, in the policy implementation process, congruence does not mean that policy has to equal the characteristics of the place but that it has to agree with the characteristics of the place. Both concepts, i.e. misfit and congruence, have an active meaning which is crucial for the policy implementation process. We assume that policy can be adjusted in order to achieve agreement and be implemented. A spatial misfit therefore only refers to the fact that policy is implemented without agreement or harmony between the policy and the characteristics of a place (Figure 3).

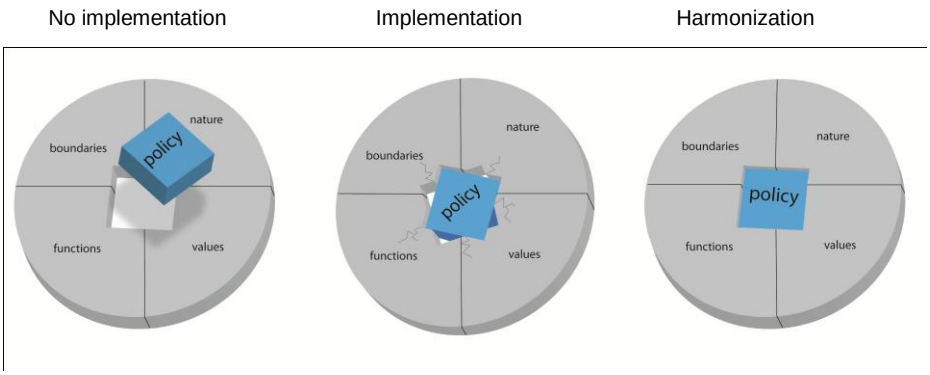

Figure 3. Spatial misfits and three possibilities in policy implementation

Congruence in the policy implementation literature mainly refers to goal and to governance congruence. Goal congruence describes a situation in which actors and organizations share interests and goals. This can increase the cooperation of actors in the implementation process (Lundin, 2007; O'Toole, 2004). Governance congruence describes similar governance modes and characteristics of the actors' relationship. For example, organizations and policy agencies, in the policy implementation process, can create a network or opt for a hierarchical command and control system. A non-congruent governance mode might create tensions in the implementation process as actors are confronted with different governance modes (Hill & Hupe, 2002). In both cases, the meaning of congruence is tightly linked to goals and governance modes. So the meaning of congruence goes beyond the sense of similarity. As such by congruence we refer to the sense of agreeing.

The misfit concept is used in several disciplines. For example, the concept of an "institutional misfit" describes an incompatibility of European and national policies, institutions and processes in the Europeanization literature (Börzel & Risse, 2000; Knill & Lehmkuhl, 1999). Another term for the same phenomenon is "policy misfit". In the Europeanization literature this means an incompatibility of EU rules and regulations with a national policy (Cowles et al., 2001). However this concept of an institutional or policy misfit is limited to institutions and policies. It excludes some aspects and the complexity of the place. The term incompatible reflects a state of being and to something which is opposing or mutually exclusive. In the Europeanization literature, a misfit is understood as a starting point, which creates an adaptational pressure - a necessity for change (Börzel & Risse, 2000). So, a misfit is a motivation for change. In our misfit definition, adoption of the policy can potentially solve the spatial misfit, but the misfit is not a necessity for change. The misfit can be a factor which influences the characteristics of the actors and thus the implementation process, but the misfit can also be the result of the implementation process.

In the social-ecological resilience literature, misfit is a central concept. For example, a "spatial misfit" refers here to a misfit in the scale of natural resources and resource management institutions. In a described case, the institutional boundaries failed to cover the complexity of the natural resources (Borowski et al., 2008). This idea of misfit describes mismatches in ecosystem properties, such as structures, processes and boundaries, and in social institutions (Young, 2002). In our understanding of ecosystems, it refers to a specific level of organization, which is defined according to its understanding and knowledge of nature. In other words, ecosystem boundaries are created and managed by institutions. By comparison, in our spatial misfit concept, we use the term nature to recognize both geographical boundaries, or nature given boundaries, and also institutional boundaries. Nevertheless, our spatial misfit concept concurs with the social-ecological resilience literature that a misfit occurs if the institutional boundaries are incongruent. Another assumption in the social-ecological resilience literature is that a misfit or mismatch of scales disrupts one or more functions of the social-ecological system, such as ecosystem goods and services (Cumming, et al., 2006). This covers everything produced by nature for human needs, such as timber, fruit, water and oxygen. Our spatial misfit concept builds on this definition and includes the key functions of a place, not only the functions of nature for humans. Accordingly, in the event of the spatial misfit, the policy or a measure disrupts key functions of the place.

The above definitions are limited to institutions, and do not include values. However, humans bestow certain values upon a place. Therefore, we assume that a policy or a measure which is not aligned with the predominant values of a place create a spatial misfit. Another aspect of institutional-based misfit conceptions is that institutions assume a certain homogeneity of several actors and groups since one of the characteristics of institutions is repetition. Therefore, the unique behaviour of a single actor is not institutional. Nevertheless, a single actor can influence the policy implementation process. The concept of a "social misfit," as used in the psychology literature, probably hints at this limitation of the idea of institutions as it refers, for example, to a person whose negative social behaviour deviates from group norms (Wright et al., 1986). As such a concept which is limited to institutions is not suitable for spatial misfits in policy implementation processes, at least according our understanding.

The idea of scale is crucial to the misfit concept. Some simply understand scale as a product of geographical relationships. The meaning of scale is, however, relative to the context and the users, even though definitions state that scale involves criteria, measurement and judgement. Levels are relative positions on a scale (Gibson et al., 2000; Scholte, 2008). In the geographical sense, scale refers to the spatial extent of phenomena. Accordingly, place and territories are spatial units on such a scale. In social sciences, the understanding of scale is often linked to the geographical understanding. For example the administrative and policy scales involve the idea of international, national, regional and local operational levels. In contrast to the geographical meaning of scale, the social meaning is often linked to a hierarchical framework, one that orders and measures the governance structure in an country and the relationship among countries (Gibson et al., 2000). The policy level and its hierarchy are also the basis of the multilevel governance idea, and the multilevel governance literature questions the hierarchical relationship of policy actors (Bressers & Rosenbaum, 2003).

2.3 Multilevel governance in the EU

Central to the misfit concept in EU policy implementation is the hypothesis that EU policy implementation is a multi-actor and multilevel process. Higher EU level policy needs to be implemented on lower national, regional and local policy levels. We assume that policy set at a higher policy level can misfit with the local place of implementation. As indicated in the previous section, the idea of policy levels is related to territorial scales and boundaries: supranational, national, regional and local (Marks, Fritz et al., 1996; Sabatier, 1991). Nevertheless, policy levels can only be understood in relation to authority and jurisdiction. Institutions have created national, regional and local boundaries, and vice versa. Furthermore, the concept of levels can also have a temporal dimension. The stage model of a policy process, and the idea of the policy cycle, divide the policy process into temporal units for analysis.

In many standard models of a multilevel governance policy process, local policy implementation follows after national and/or supranational policy formulation. Even though temporal units have an analytical usefulness, the stage system of policy implementation does not necessary reflect the reality as some stages are temporally mixed or left out (Hupe & Hill, 2006; Sabatier, 1999). For instance, bottom-up studies

of the implementation process, starting by studying policy implementation at the bottom of the implementation system, and focusing on the target groups of the policies, show that policy implementation is a continuous process of conflict and compromise (Hill & Hupe, 2002). Nevertheless, the idea of territorial policy levels provides useful analytical units which also match with the distinction made by EU and national statues and other policies.

Multilevel governance is a concept which is understood and defined in different ways by scholars. A quite comprehensive understanding of the concept is offered by Piattoni: "The term multi-level governance denotes a diverse set of arrangements, a panoply of systems of coordination and negotiation among formally independent but functionally interdependent entities that stand in complex relation to one another and that, through coordination and negotiation, keep redefining the interrelations". (Piattoni, 2009)

The literature on the European multilevel concept mainly addresses three phenomena of the European integration process. First, the literature refers to the involvement of private actors and multilevel public actors as well as to the increasing variety of terrains in EU policy processes. Second, multilevel governance refers to changing central state structures. Third, it describes a normative idea of European policy processes.

The inclusion of private and multiple public actors is incorporated in the EU's foundation treaties. The European subsidiary principle demands that decisions are taken at the lowest practical policy level, as close as possible to the citizen, which also involves private stakeholders in the decision-making process. Several studies have highlighted this aspect of multilevel governance. The involvement of multiple public and private actors is often described as a horizontal and vertical shift in authority (Hupe & Hill, 2006; Kohler-Koch, 2003). For example, Bache and Flinders (2005) define multilevel as referring "to the increased interdependence of governments operating at different territorial levels whilst 'governance' signalled the growing interdependence between governments and non-governmental actors at various territorial levels". Here, the focus is on the role of NGOs as well as public and private actors in the policymaking process.

Another highlighted aspect in the multilevel governance literature is the changes in central state structures. The Treaty of Maastricht, for example, introduced the Committee of the Regions which consists of elected and political representatives of regional and local bodies. Since then, treaties oblige the EU Commission and the European Parliament to consult this committee whenever a proposal affects the regional or local levels. The EU Commission identified several EU policy areas as affecting the local level, such as health, education, transport, environment and climate change. Hence, the EU treaties oblige governmental actors on the EU, national, regional and local levels to interact. Some scholars use the multilevel concept to illustrate the relaxation and/or abolition of hierarchical command and control mechanisms. Others conceive a non-hierarchical and non-coercive relationship among the EU policymaking actors (Kohler-Koch, 2003). This view assumes a mutual understanding and cooperation among the private and state actors to a certain extent. From our point of view, this seems a rather normative assumption. In the EU multilevel governance approach, the national governments remain main central actor in the policy process rather than the mutual understanding and cooperation we recognized through multiple

linkages of governmental and non-governmental actors. Furthermore, these actors operate on different institutional and territorial levels (Peters & Pierre, 2005).

Finally, multilevel governance describes a normative idea on European policy-making and implementation. The EU Commission defines the multilevel interaction as a partnership of national governments. Subsequently, the national governments are responsible for involving regions and cities in EU policymaking (EC, 2001). However, many multilevel governance studies identify a stronger relationship since the EU only stresses the responsibilities of member states in the EU treaty. Many scholars see the relationship of the policymaking actors in the EU as mostly characterized by interdependence (Bache & Flinders, 2005; Benz, 2009; Kohler-Koch, 2003; Marks, et al., 1996). Accordingly, actors depend, or rely, on each other, a situation which can be rooted in geographical position and access to resources as well as in treaties and jurisdiction. This dependence leads to joint decision-making (Bernard, 2002; Hooghe, 1996). On this basis, the European Commission, and some multilevel governance scholars, consider multilevel governance as the desirable way to make and implement EU policy. However, implementation research shows that the interdependence of actors is not always sufficiently strong to require them to depend on each other. In the real world, interests often conflict or clash, and actors are excluded from a decision-making process even though they are entitled to participate. Hence, actors do not always act according to the shared resources but rather according to their own resources and their own interests (Bressers & Kuks, 2003; O'Toole Jr, 2005). Although such actors do not depend on each other, they mutually influence one another. Thus, these actors are interrelated and mutually influence the policy implementation process. Therefore, we view multilevel governance as being characterized by an interrelationship among the policy implementing actors.

Even though the idea of policy levels has a spatiotemporal dimension, the multilevel literature mainly addresses the actors in and the structure of EU processes. Place is not considered an independent variable of the policy implementation process. Further, the focus of the European multilevel governance literature is on fundamental questions about the relationship of the EU level with lower-level actors, the governance structure and the reasons why national governments diffuse power. Questions about local policy implementation, about the policy in the real world of action, are less often examined in the multilevel governance literature. In response the next section investigates 'place' in the multilevel governance literature and, following this, the implementation literature will be reviewed.

2.4 Multilevel governance and the place

Most European multilevel research is based on exploratory case studies which are oriented towards national, regional and local situations. Several multilevel governance studies, which address the EU's cohesion and structural policy, have identified the territory as an influential aspect of the EU policymaking process. Hooghe indicates that the policy and interaction of the policymaking actors differ across territories, a situation which influences EU policy implementation (Hooghe, 1996; Marks et al., 1996). Further, some scholars describe the role of actors in local physical planning and development policy since the EU structural and cohesion policy aims to reduce

economic, social and territorial inequalities as well as promote national, regional and local integration in the EU (Morata & Munoz, 1996; Nanetti, 1996). However, in these studies, territory is not considered as a geographical place and is not used as an analytical tool to explain differences in policy implementation.

Provided the nation state is conceived of as a place, then well-studied characteristics of a place, in the multilevel governance literature, are the institutional and geographical boundaries of the EU and of the nation state. The multilevel governance concept questions territorially bounded sovereignty, authority and jurisdiction, as well as the legitimacy of the nation state. In the multilevel governance concept, the supranational EU policy level has become more powerful, a situation that blurs national boundaries. For instance, in Europeanisation studies, the focus is mainly on the effect of EU policy as an explanatory variable of national developments, even though this effect cannot typically be isolated from other international, national and regional policies (Anderson, 2003; Haverland, 2006).

From this perspective, place, and its characteristics, has become less important in the EU policy and the EU does not stress all the national, local and regional geographical, environmental and social peculiarities. In the extreme view, the EU governance level is not only supranational but also supra-territorial. The interactions of policy actors transcend territorial geography. In other words, spatial boundaries are regarded as less important because actors now create dynamic networks which are independent of place (Amin, 2004; Scholte, 2008). A good example is EU e-governance, the European online government system which provides EU citizens with access to services and information, as well as giving them the opportunity to directly participate in democratic processes. An alternative view is that the central state authority is delegated to both the higher European level and to the lower regional and local levels. Through this decentralization, smaller place-based entities such as localities and cities have gained power. The interconnection of higher-level and lower-level policymaking actors can catapult interests directly from the local to the national and European level. Here Brenner speaks of a re-scaling of the territory (Brenner, 1999).

The previous sections showed that place in multilevel governance is linked to the concept of the nation state and its boundaries. Other characteristics of a place, which are important in investigating a spatial misfit in the policy implementation process, are treated as minor aspects. The importance attached to boundaries can be explained by the major focus of the multilevel governance literature on governance structures and actor relationships. The concept is not intended to explain how policy can be converted into action at the local place of implementation. Spatial misfits often appear when policy needs to be implemented or during the implementation. Therefore, spatial misfits are only full understandable if they are conceived of as a phenomenon of the policy implementation process. The next section investigates to what extent the policy implementation literature recognizes ‘place’.

2.5 Policy implementation

An investigation of implementation literature shows that it mainly addresses three aspects of the policy implementation process: the policy, the social interaction and the policy implementation context. For example, Hupe and Hill note that “… the structure

of a policy process can be seen as consisting of various elements: actors, set of activities, action situations, and layers" (Hupe & Hill, 2006). Actors are intending to implement, are implementing or have implemented something: the policy. The first aspect of the policy implementation process is investigated in studies which question the policy as such, the policy contents and design, the tools and the effects. Further, with regard to the second aspect, social-interaction-oriented studies emphasise the organization structure and the behaviour of actors. Scholars question the relationships and the roles of the actors in the implementation process. Here, the literature often distinguishes between official actors, such as officials and government agencies, and unofficial actors including individual citizens and interest groups. Finally, there are basic research questions related to the context of the policy implementation and the influencing factors, such as the political culture, the state welfare system, and technological knowledge.

There are three generations of implementation research that shape the field. Although this analytical distinction helps in organizing the policy implementation literature, the generations are not clearly demarcated. The first two generations identified a mass of explanatory variables, including aspects of place. However there is almost no systematic use of place as a key concept in implementation research. The so-called first generation of research emanated from public policy evaluation research and probably started to develop the field in the mid-1950s (deLeon & deLeon, 2002; Saetren, 2005). The dominant idea behind these exploratory and inductive case studies was that policy must have a purpose and an end. The interest of scholars was on the policy outcome. Hence, many first generation studies are normative and investigate the failure of policy during implementation. These studies often focus on the first aspect of policy implementation, the policy itself, assuming that policy failure is largely the result of a bad policy design, unclear goals and/or unsuitable policy tools. Further, the first generation of implementation studies analyse the official implementers, official documents, structures, official policy goals and tools. The perspective is hierarchical and based on the assumption that policy implementation needs to follow the official structures, from the central government to the local authorities: from the top to the bottom. Hence, the first generation studies are often classified as top-down studies. Given that most first generation studies are single case studies, they do have a sense of place. To a stronger degree, the research is also context-dependent as the case descriptions allow little generalization. The first case studies describe the situation where a policy has to be implemented, but they do not regard the place as an explanatory variable of the process. For example, Pressman and Wildavsky's pioneering book on the implementation of a regional employment programme in Oakland, California, emphasises the relationship of governmental actors with the resources and money (Pressman & Wildavsky, 1973).

Researchers in the second generation of implementation studies predicted patterns of policy implementation, identified variables and developed conceptual frameworks. The focus here was not only on the policy outcome but also on the social interaction. Some studies followed the top-down perspective of the first generation, other case studies investigated the policy implementation process from the bottom, the smallest actor up towards the public administrative levels (Barrett, 2004; McLaughlin & Elmore, 1982). The 'smallest' actors in a policy process in the bottom-up studies are viewed as the policy target groups, as in Lipsky's case study on street-level bureaucrats that

investigates the role of social workers and police officers in the implementation process (Lipsky, 1980). Apart from this shift in research perspective, the second generation literature stresses the importance of the policy design and the governance context including institutions and actor networks. For instance, Van Meter and Van Horn (1975) recognize that political, social and economic conditions are important variables in the implementation process. Another example is the framework of analysis by Mazmanian and Sabatier which includes policy design aspects, such as the policy objectives. Additionally, the second generation studies stress the socioeconomic conditions and technological context as decisive variables in the implementation process (Sabatier & Mazmanian, 1981).

While these second generation studies do include the social aspects of place, they mainly ignore the geographical, spatial and ecological characteristics. Others recognize the importance of the values of a place. For example, Barrett and Fudge (1981) explain how values, perceptions and attitudes shape the problem definition and the action of actors. However, most second generation studies do not consider place as a key variable in the implementation process. Many studies do not even give systematic attention to the implementation context, and focus only on the state-society relationship. For example, Mayntz's conceptual framework emphasizes the policy problem and the policy design (Mayntz, 1983).

The third generation of studies sought to synthesize the benefits and shared some of the findings and research techniques of the bottom-up and top-down perspectives of policy implementation research. The third generation learnt from the previous generations, analysing both the public and private actors in the implementation process. The scholars, for example, accepted that policy is not implemented along a clear implementation chain, as assumed by first generation studies. Additionally, as recognized in the bottom-up studies from the second generation, the third generation studies also recognize that policy implementation is a process of conflicts, bargaining and compromises between the official actors and the policy target groups, as well as among the official actors and the various target groups. Moreover, scholars of the third generation aim to develop and test a more universal implementation theory. Instead of explaining a certain outcome and a certain implementation process in a specific case, the third generation studies aim to explain the variability in implementation processes and to test theory (deLeon & deLeon, 2002; Goggin et al., 1990). The communications model of intergovernmental policy implementation of Goggin, Bowman, Lester and O'Toole, for example, is a dynamic model which recognizes that the implementation process takes place under certain "environmental conditions". These conditions have an impact on policy implementation, as the social and physical environment can support or hamper the process. Therefore, the model includes the concept of "state ecological capacity" as an intervening variable of the process. However, this concept is not the same as the idea of place. The ecological capacity is comparable to Mazmanian and Sabatier's socioeconomic conditions and technological context as it comprises the cultural environment of a country. Further, it contains geographical aspects such as the level of urbanization (Goggin et al., 1990). Although implementation research recognizes and thoroughly examines elements of the place concept, such as its values, functions and spatial scales, many studies fail to cover the whole idea. As explained earlier, our concept of place also includes the nature, the natural functions and values. In

the next section, we will focus on one of the third generation theories, and one that we will modify and use for our analysis of the implementation process.

2.6 The Contextual Interaction Theory

2.6.1 Basics of the Contextual Interaction Theory

Contextual Interaction Theory (CIT) is a process-oriented theory in which policy implementation is understood as "… process(es) that concern the application of relevant policy instruments" (Bressers, 2004). The initial version of CIT emphasized the importance of policy instruments in the implementation process. The current policy implementation definitions reflect the roots of this theory. The definition above distinguishes between the application of the policy instrument, which reflects an action, and the policy instrument as such. The public policy literature offers no general or dominant meaning and definition of policy instruments. Accordingly, the idea of policy instruments varies. In the CIT, a policy instrument is defined as, "everything that can be used by or on behalf of a government to increase the likelihood of attaining one or more policy goals" (Bressers, 1994). The term 'everything' does not refer to a specific set of instruments but includes all the crucial things in this matter, emphasizing the multiplicity of policy instruments. Some scholars equate policy instruments with institutions (Lascoumes & Le Gales, 2007; McDonnell & Elmore, 1987; Salamon, 2002). However, this effectively excludes policy tools which are not institutionalized such as communications with single key actors and unique agreements which can significantly influence policy implementation processes, and the physical and spatial effects of, for example, deforestation and urbanization. Bressers dismisses this view and considers institutions to be an aspect of policy instruments (Bressers, 2004).

Other policy literature suggests categorizing of policy instruments. McDonnell and Elmore (1987) for example, suggest four classes: mandates, inducements, capacity-building and system changing (McDonnell & Elmore, 1987). Another frequently used categorization suggested by Bemelmans-Videc, Rist and Vedung distinguishes between regulations (sticks), economic means (carrots) and information. Variations in the outcomes are explained through the different responses of the target groups and their contexts (Bemelmans-Videc et al., 1998). Such categorizations imply that there is, to a certain extent, a direct link between the policy instrument and the policy outcome. Additionally, the use of such categorizations, might suggest that government has a sort of toolbox from which it can choose instruments according to the problem. These assumptions simplify the real policy implementation process by neglecting the mutual interaction of the actors, the characteristics of the actors and the complex contexts in which policy implementation takes place. An alternative classification of policy instruments that accords with the CIT principles are provided by Bressers and O'Toole (2005).

The CIT recognizes the explanatory limitations of theoretical frameworks that only emphasize policy instruments. Hence, an additional fundamental assumption of the CIT is that policy implementation is not a single process, which turns a focused input into an output, but an interplay of various human interactions. Thus, the policy implementation process is understood as a social-interaction process. Further, these interaction

processes are determined by the relevant actors and their core characteristics (Bressers, 2004, 2009). By emphasizing the social-interactions of core actors, the CIT helps to explain why some policies are changed during implementation and other remain unimplemented.

Observations of real world policy implementation processes show that crucial actions arise from responsible government officials interacting with the representatives and members of the target group in order to implement a certain policy. Interaction does not always mean cooperation. Actors can also try to prevent or change a policy. Accordingly, another important assumption of the CIT is that actors do not act only according to the availability and feasibility of policy instruments. Rather, actors act according to their core characteristics: their motivation, cognition, capacity and power (Figure 4). These characteristics are included because it is assumed that these characteristics directly influence the actors and their social interaction processes. Other factors, including the policies and their targeted changes, can only directly influence the actors' core characteristics, and can therefore only indirectly influence the social interaction processes. Figure 4 shows how the variables mutually influence each other (Bressers, 2009). However, the core characteristics should not be understood as single independent variables, but considered in the context as they adapt to changes in the context of the policy implementation process (Figure 5).

2.6.2 The actors' core characteristics

Motivation

The first core characteristic, motivation, is a driving force that initiates and directs actors. In the CIT framework, Bressers distinguishes between intrinsic and extrinsic motivation. Intrinsic motivation refers to an actor's own, or personal, values and goals. These personal goals do not necessarily serve self-interests. Personal goals can also be generated for altruistic reasons. Intrinsic motivation depends on the extent to which a policy instrument promotes or obstructs one's personal goals and values. Furthermore, intrinsic motivation arises from an actor's self-effectiveness assessment. Extrinsic motivation originates in external pressures such as legal obligations (Bressers, 2004, 2009; Bressers & Lulofs, 2010). As with the CIT framework, policy implementation frameworks of the last two generations of policy implementation assume that the actors' motivations are a decisive factor in the implementation process. Even though motivation is not labelled as an independent variable in any of the three theoretical frameworks we compared to the CIT, the elaboration of some of the independent variables in the other frameworks indicates that the motivation of the implementing actors is a decisive factor.

For instance, one of the first policy implementation models, the 'Policy Implementation Process' developed by Van Meter and Van Horn, recognizes policy standards and objectives as an independent variable. Implementing officials compare these objectives with their own goals and values. Disagreement or consensus over the goals and values influence the performance of officials, and therefore are considered as determinants of motivation for compliance (Van Meter & Van Horn, 1975). Another example is Sabatier and Mazmanian's 'Conceptual Framework of the Policy Implementation Process'. The framework views the commitment of officials to statutory objectives as an independent variable. Sabatier and Mazmanian explain that it is crucial

to the policy implementation that the officials' policy orientation is consistent with the new policy. Further, the attitudes of constituency groups are considered important as opposing interests of the target group can hamper the implementation process (Cowles et al., 2001). According to this elaboration, the interests and goals of the actors are decisive, and these function as motivation to support or to hamper the implementation process. The communications model of intergovernmental policy implementation by Goggin, Bowman, Lester and O'Toole also recognizes the internal and external motivation of actors. They explain that actors interpret and respond to goals and objectives differently and that this depends on the internal and external characteristics of the actors (Goggin et al., 1990). These examples show that policy and personal goals, values and rules do not directly influence the interaction process but create motivation for actors to act. Motivation, as recognized in the CIT, covers these examples.

Cognitions

As noted earlier, the CIT places every core characteristic in the context of the other actor characteristics. The CIT assumes that core characteristic cognition influences the motivation of actors and vice versa. Cognition in the CIT refers to the actors' information filtering and processing. Cognition therefore involves the actors' frames of reference and boundary judgments. It also influences the learning process of actors and the extent to which actors accept new information. Information access, such as the jargon in reports and the availability of reports, is also crucial for cognition (Bressers, 2009; Bressers & Lulofs, 2010). Figure 4 shows that motivation influences the focus of attention and creates, for example, a selective perception. Actors can be more aware of information that supports their own goals and values. Cognition also influences the motivation of actors. Actors interpret reality, and recognize some information as an opportunity, or a disadvantage, in the sense that actors might spend more time on understanding or on dismissing information. Cognitions are also a threat since actors reason according to their own goals and values (Bressers & Lulofs, 2010; Spillane et al., 2002).

In comparison, other policy implementation frameworks rarely directly mention the cognition of actors as an independent variable. Instead, they consider information, knowledge, communication and the clarity of policy goals and objectives as decisive in policy implementation. However, in elaborating of the independent variables of these frameworks, scholars explain that actors must understand policy goals and interpret information for an effective implementation of a policy. Further, it seems to be vital that actors successfully transmit information. Van Meter and Van Horn include, in their policy implementation framework, the variable 'Interorganizational Communication and Performance Activities' (Van Meter & Van Horn, 1975). Sabatier and Mazmanian consider clear and consistent objectives as important in order for officials to understand and take decisions which are consistent with policy objectives (Cowles et al., 2001). Goggin and his colleagues recognize, in their communications model, that decision-makers have a pivotal function and regard them as receivers and evaluators of information (Goggin et al., 1990). Hence cognition seems to be crucial to the policy implementation process.

The theoretical frameworks mentioned here, and other scholars in this field, show that the information and knowledge used in policy implementation processes are based on interpretative judgments. In other words, facts, interpretations and opinions of the

interacting actors also produce knowledge and information (Fischer, 2004; Majone, 1989). Hence, the CIT variable cognition includes information generation, distribution and processing, aspects which are also recognized by other models of policy implementation.

Capacity and Power

The third core characteristic of the CIT is capacity and power. The CIT understands power and capacity as a single variable as these two factors of the policy implementation process are tightly linked. Power refers to the capacity of the actors in the implementation process to implement the policy, including the capability to hamper or to change the process. In general, capacity is understood as the ability to advance specific policies or one's own purposes. The CIT considers power as a dyadic relationship between at least governmental officials and members of target groups (Bressers, 2004, 2009; Bressers & Lulofs, 2010). As policy implementation is an interaction process, not only governmental officials exert power. Both groups of actors interact such that governmental officials can also be recipients of power exerted by members of the target groups.

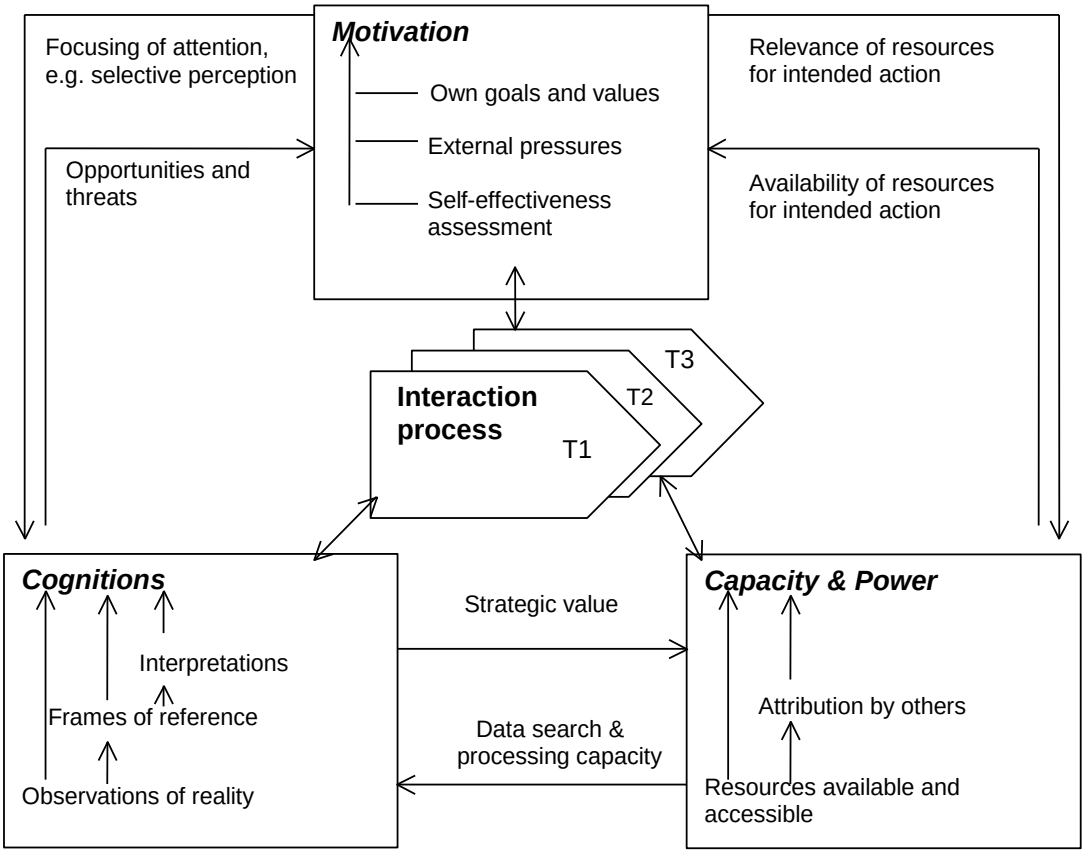

Figure 4. Dynamic interaction between the key actor-characteristics and social-interaction processes (Source Boer & Bressers, 2011)

The CIT mainly recognizes two sources of power in the implementation process: the attribution of power to an actor by other actors, and the availability of resources. The attribution of power is closely linked to legitimacy, trust, respect, and fear. Additionally, in the CIT, it is assumed that power cannot be stabilized without access to and the availability of resources (Bressers, 2009). Resources as used in the implementation process refer to money, rules, technologies and natural resources. Further, power and capacity are related to the other characteristics of cognition and motivation. Figure 4 shows that power and resources influence the cognition of actors, with powerful actors representing their interests, intentions and goals. For instance, being able to process information and having a consciousness of the policy implementation context provide a source of purposeful acting. Cognition also guides the search for information. Power and capacity influence the motivation of actors: for example, access to and the availability of resources contribute to the motivation to implement a policy. Conversely, the relevance of certain resources influences the demand for and the dependency on them, and this influences the power of resource-controlling actors.

Other policy implementation frameworks also recognize that the power and capacity of actors is crucial to the implementation process. For instance, Van Meter and Van Horn state that resources such as incentives and funds encourage or facilitate effective implementation (Van Meter & Van Horn, 1975). Similar to the understanding of power and capacity in the CIT, this view reflects the dependency of actors on resources and the influence on motivation. Sabatier and Mazmanian emphasize the allocation of financial resources, leadership, the socio-economic conditions and technology. By leadership, Sabatier and Mazmanian refer to the officials' ability to convince opponents and target groups as well as to mobilize support for their objectives. Resources are understood in relation to the actors' perceptions since they state that the socioeconomic conditions affect the problem's perception (Cowles et al., 2001). Goggin and his colleagues also recognize capacity as an independent variable in the implementation process. In their model, state capacity is determined by the organizational structure, personal and financial resources. Even though these policy implementation models have identified certain aspects of power and capacity, they refrain from using a more general concept of power: the concepts used are still very case-related. By comparison, the power and capacity concept as used in the CIT is broader and general, and covers several appearances of power and resources in the policy implementation process. Nevertheless, the actors in the policy implementation process cannot be analyzed and understood if they are removed from their context. Therefore, the CIT recognizes context as vital in policy implementation. The next section explains the concept of policy contexts in the CIT model.

2.6.3. The context of the policy implementation process

Every policy implementation process is embedded in specific circumstances which influence the actors and the process. Due to the fact that a policy implementation process can last more than a decade, the circumstances are numerous and can be interpreted differently over time. The CIT identifies three main contextual factors: the specific context, the structural context and the wider context, which all influence the characteristics of the actors (Figure 5). The contexts are not understood as single context

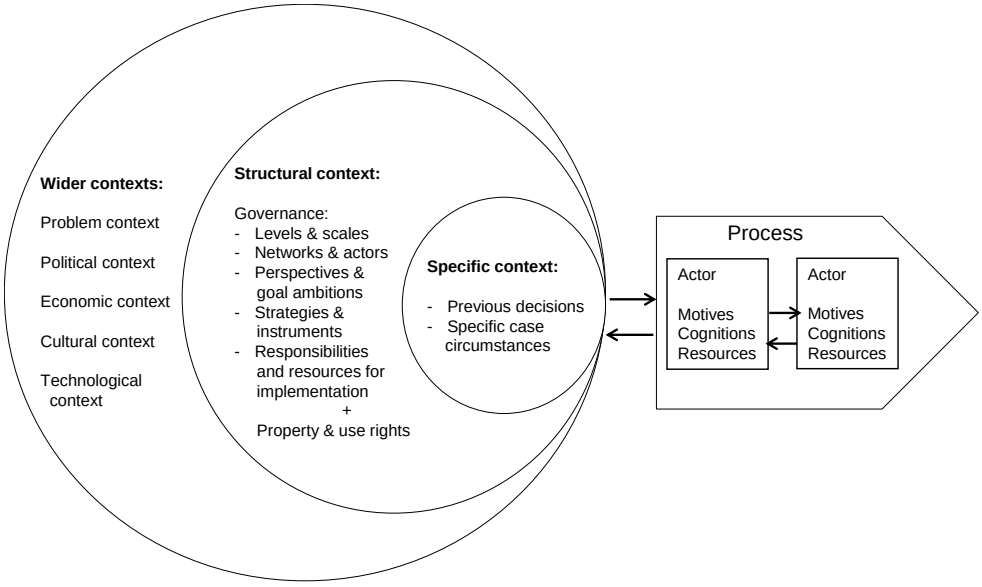

Figure 5. Layers of the contextual factors with relevance for actor characteristics
(Source Bressers, 2009)

but as overlapping layers (Bressers, 2009). The different contexts could influence the actors' characteristics simultaneously but in different ways.

The specific context

In the CIT, the specific context refers back to previous decisions and to specific case circumstances, such as previous decisions on targets, instruments and time frames. Specific circumstances can also include social and geographical aspects. The place concept, as explained earlier, can therefore be classified as part of the case circumstances and of the specific context. For a further explanation see Section 2.5. Policy ideas and instruments can also form the starting point of the policy implementation process (Bressers, 2009). This means, in the CIT, that previous decisions and instruments form the context of the case study, and will have a starting point and an end, determined by the researcher. Similar to the CIT, the model of Goggin and his colleagues also recognizes that the policy implementation process and the outcome might change over time. Hence, they stress that the feedback and the redesigning of the policy is a vital element of the policy implementation process. Nevertheless, they do not consider the redesigning phase as part of the process here. Sabatier and Mazmanian (1981) understand policymaking as an '*iterative process of formulation, implementation and reformulation*'. Accordingly, previous decisions and changing objectives are part of policy formulation and reformulation, but not part of the implementation phase (Cowles et al., 2001). Van Meter and Van Horn also make a clear distinction between implementation and reformulation of a policy. Accordingly, goals and decisions of preceding policy decisions first have to be implemented before the next implementation process can start (Van Meter & Van Horn, 1975). This perspective corresponds to an analytical distinction between policymaking and implementation but neglects that, in the real world of action, the outcomes of previous decisions, irrespective of whether the policy objectives are reached or changed, form the context for the basis of policy implementation.

The structural context

Structural context refers to the governance structure, its levels, scales, networks and its actors in general. The actors in the implementation process are embedded in this governance structure. For example, in a European policy implementation process, the actors are part of the European multilevel governance structure. Hence, the structural context is not related to specific cases or processes, but concerns similar implementation processes. The context also includes the more general, not case-specific, societal problem perceptions and perspectives as well as general goal ambitions, and the more general strategies and instruments which affect the policy implementing actors. Property and use rights, as well as the resources and responsibilities for the implementation, are also part of the structural context (Bressers, 2009; Bressers & Lulofs, 2010). Other policy implementation frameworks do not directly recognize the structural context as defined in the CIT but refer to some elements of it, such as the federal system of the USA, public perceptions, public support, and more case-specific, the bureaucratic organization of actors. For instance, according to Van Meter and Van Horn, the capacity of the implementing agency to implement the policy also depends on the linkages with the policy making and/or policy-enforcing bodies. Moreover in their explanation of their model, the US federal structure general objectives and resources all influence the implementing agencies, even though Van Meter and Van Horn do not include these factors in their model (Van Meter & Van Horn, 1975). The CIT on the other hand recognizes such factors as part of the governance structure. Sabatier and Mazmanian stress the importance of general legal objectives, traditional orientations and public opinion that influence decisions by the implementing agencies (Cowles et al., 2001). In comparison to the other two models, Goggin and his colleagues recognize in their communications model the factor of federal-level inducement and constraints. This variable refers to the federal system, the federal law and general objectives. This variable is comparable to the structural context of the CIT although the communication models are tailor-made for policy implementation in the USA.

The wider context

The wider context refers to the problem‘s, political, economic, cultural, and technological contexts. This context, for instance could be an economic crisis or the political party system that influences the actors more indirectly. The point is that the entire implementation process cannot be understood without also considering the wider context (Bressers, 2009; Bressers & Lulofs, 2010). Compared to other contexts, the economic, social, cultural, technical, and political conditions are more systematically captured by other models of the policy implementation process. Often these factors are considered as a direct influence on the capability of the implementing actors, such as through technical advice or knowledge and political support (Van Meter & Van Horn, 1975). Also Goggin and his colleagues consider the economic condition, as ecological capacity, a factor determined by the socioeconomic and political conditions (Goggin et al., 1990). Sabatier and Mazmanian recognize that variations in socioeconomic and technological conditions can affect the problem perception, programme preferences and public support. Additionally, as in to the CIT, they stress that the policy implementation can influence these conditions.

2.6.4. The Contextual Interaction Theory and place

Place provides a physical and spatial context for multilevel policy implementation processes. On the one hand, place can therefore be understood as an independent variable of the process. The characteristics of place, boundaries, nature, functions and value all create a specific case circumstance, both physically and socially. Accordingly, in this study a revised version of the CIT is used. In this version place is considered as a specific context of the policy implementation process. In the original version of the CIT, previous policy targets and decisions were part of the specific case circumstance, but place was absent. Nevertheless, the characteristics of the place could have influenced previous policy targets and decisions. Furthermore, previous targets and decisions can create a misfit with the characteristics of the place, and hence a misfit can be the starting point of a multilevel policy implementation process. In other words, the place affects the motivation, perceptions and capacities of implementing actors and the outcomes of implementation processes. Further, during implementation processes, characteristics of the place can change, especially when the process has a long duration. As with the specific context in the original version of the CIT, the characteristics of place are influenced by the structural and wider context as illustrated by the loops in Figure 6. For example, the functions and values of a place can change through policies, historical and other events. Institutional boundaries can also be changed through policies which are not part of the policy under consideration. Additionally, natural boundaries can change through natural processes or through human behaviour. This dynamic of place affects the specific context and also the characteristics of the implementing actors.

On the other hand, place is also part of the output and the dependent variable, especially when policy addresses the physical form of the place. Physical changes of a place are often immediately visible and measurable. For example, changes in spatial boundaries and functions of a place are obvious objective outputs. In comparison, changes to values and nature are less distinct and often more subjective outputs. Nevertheless, the characteristics of a place are interrelated, physical change to, for example, nature and boundaries affect functions and values. Conversely, changes in the values and functions of a place can be an output of a policy implementation process even if the policy measures are only partly or even not implemented. In this latest version of the CIT framework, a change to the place and its characteristics, because of policy implementation processes, is recognized as an output. Accordingly, multilevel policy implementation processes can also produce spatial misfits, even if the policy is not fully implemented. A spatial misfit, as an evolving output, does not necessarily mean a permanent failure of policy. As explained earlier, a misfit can stimulate a restart to the implementation process. Hence, this version of the CIT includes a backwards loop to the specific context. In the event that modifications to the place, as an output, stimulate a restart of the implementation process, the place again becomes part of the specific context and an independent variable (Figure 6).

In comparison with the original version of the CIT, the amended version of the CIT used in this research shows that, in a multilevel implementation process, actors from

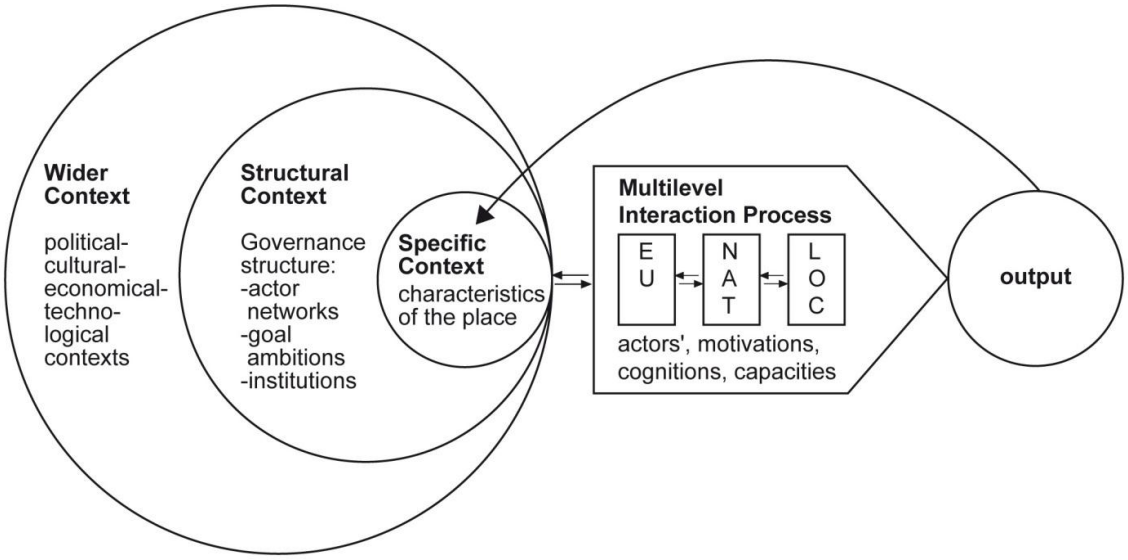

Figure 6. The place as Specific Context and the European multi-level interaction process

different governance levels contribute and interact. This research observes Malta's divisions, and includes the EU, the national and the local levels in the theoretical framework. In general, multilevel governance interaction processes can involve even more levels, such as a regional level.

2.7 Methodology

The study aims to examine the spatial misfits that originate somewhere between the EU policy level and local policy implementation. The large-scale "placeless" EU policy is often considered as a cause, determining spatial misfits in the local and small-scale policy implementation process. In Malta, preparation for and access to the EU created a multilevel governance system, through the introduction of local councils and the supranational EU level. Malta's small, size and the unusually high population density, further create a high likelihood that the large-scale EU policy will spatially misfit with the place of implementation. The previous sections, 2.5 and 2.6, indicate that the EU-level policy is implemented in a multilevel and multi-actor process at the national and local levels, even though this process is far less elaborate in Malta than it is in most other EU countries.

The study investigates two research questions; *to what extent do the EU policies spatially misfit with the place of implementation in Malta,* and *to what extent do the spatial misfits originate from the common European policies or from Malta's national multi-actor interaction implementation process?*

2.7.1 The research design

To investigate the research questions, a case study research design is used. The study includes five cases in three different EU policy sectors. Malta, together with the policy sectors, create a specific context for all five cases. The Trans-European Transport Network policy includes the Manikata bypass project VIII (Case 1) and the Ghadira Bay upgrading project X (Case 2). The renewable energy policy includes the proposed wind farm at Sikka l-Bajda (Case 3) and the proposed wind farm at Wied Rini L/O Bahrija (Case 4). The aquaculture policy is reflected in the aquaculture zone project in the south east (Case 5), the only other proposed aquaculture zone project remained at the proposal-stage without any concrete plans. The reason for using multiple cases is to avoid precipitate conclusions based on the findings from a single case.

The reasons for selecting Malta as case study area, among all other EU member states, was explained briefly in Chapter 1. We deliberately chose for the country where the likelihood of spatial misfits due to EU policies would be greatest (see the research questions). Choosing extreme case sampling in this respect implies that, if we cannot find spatial misfits here, they will probably not occur very often elsewhere, and if we cannot establish the EU policies as a dominant cause here, this is even more unlikely in other EU countries.

Firstly, as already outlined in detail in Section 1.3, Malta has the highest population density in the EU, and has a very high level of built-up areas. These extreme conditions create a high probability of spatial misfits.

Secondly, the "purity" of the implemented EU policy is apparent in Malta. Even though some large cities in the EU have higher population densities, the density is not nationwide and the EU policy is often modified by several governance levels through administrative divisions that create government districts, rural districts, urban districts and city states. Malta has a kind of compressed governance system: its national governance system is subdivided into 68 local councils, but the power of these councils is very restricted. Thus, Malta's governance system amounts to the EU level, the national level, and a very limited local level. EU policy is more directly implemented on the local level, and is less filtered during the implementation process due to fewer administrative levels.

Thirdly, the size of the governance system is also a practical reason for the case selection. Due to Malta's small size, the number of actors and the size of the organizations involved in the policy implementation process are limited.

Aside from these reasons for selecting Malta as our case study area, essentially a form of extreme case sampling, we deliberately tried to avoid coincidental features of a specific EU policy or of specific case characteristics, which would potentially lead to unwarranted conclusions. So, in case selection within Malta, we restricted the choice to cases that have a spatial component and then tried to select broadly within this field. This led to the inclusion of three EU policy sectors and five concrete cases. The explanatory power and representativeness of the cases are important. The three policy sectors and the five cases were chosen for the likelihood that the implemented policy would have spatial impacts. Furthermore, the three policy sectors reflect three different situations with regard to EU policy. Due to Malta's recent accession to the EU in 2004, interweaving its own policy with EU policy has only recently commenced (Trans-European Transport policy). Malta has had to adjust its policies to the existing EU

policy framework (renewable energy policy) but has also started to influence EU policy (aquaculture policy).

One goal of the research is to identify to what extent the spatial misfits originate on the European policy level. Malta had an existing transport policy and road system before joining the EU. Through accession, Malta's transport policy became subject to the common European transport policy. In the second policy sector, renewable energy, Malta had no renewable energy policy and gradually developed a policy in line with EU guidelines after EU accession. In the third sector, sustainable aquaculture, Malta had more competence than the EU with regard to regulating aquaculture activity and influenced the EU aquaculture policy following accession.

Although Malta is unique in the EU in terms of its unusually high population density and built-up areas, the study is not a single case study since it has more than one unit of analysis (Miles & Huberman, 1999). However, in each case the same measurements are used, an approach which makes the findings more robust (King et al., 1994; Yin, 2002). With regard to spatial misfit, it is expected that Malta will be representative but not unique. As explained in Section 2.2.1, other misfit concepts partly contain some characteristics of place, a concept recognized in other countries. The EU policy, the independent variable of this study, applies to other EU states. However, it is unlikely that actors in the policy implementation in every member state respond in the same way as those in Malta because they are in a different context and their key characteristics are different. A premise of the Contextual Interaction Theory, as detailed in Section 2.6.4, is that the actors in the implementation process, and their characteristics, cannot be fully separated from the implementation context (Bressers, 2004).

Even though, by choosing Malta, we deliberately minimized the "thickness" of the multilevel governance implementation process, it is still difficult to isolate a sort of "EU effect" as a cause of spatial misfits. The study cannot make use of a control group, an EU member state where the EU policy is absent. Even in candidate EU countries, the EU influence starts before accession (Borg & Inguanez, 1993; Dupont & Sciarini, 2001; Marthe Narud & Strøm, 2000). One solution to this problem is to investigate a policy sector with weak EU influence (as in Case 5) although this does not mean that the EU policy is absent. Nevertheless, it is possible to trace factors that have a clear connection to the outcome through retrospective analysis, also known as modus operandi (Scriven, 1976). Scriven suggests creating an inventory and a separate assessment of all possible factors which have a clear connection to later outcomes. Considering the complexity and dynamics of the multilevel governance implementation process, and of place, the number of factors possibly creating a spatial misfit exceed the feasibility and capability of this study. The use of Contextual Interaction Theory as the theoretical framework (explained in Section 2.6) and the concept of place makes it possible to form an inventory of important key factors that influence the occurrence of spatial misfits.

Another assumption of the Contextual Interaction Theory is that a policy implementation process consists of several social-interaction processes among key actors, and that these are influenced by their characteristics. This creates a case-specific dynamic in the multilevel policy implementation process, which will influence the outcome of the process in each case. In other words, the EU policy (the independent variable) does not directly cause the spatial misfits (the dependent variable). The interaction process of the key actors with their characteristics, as well as the

characteristics of place, form an intermediate variable, one that causes variations in the dependent variable and is itself subject to changes by the independent variable (Figure 7). Some of the methodology literature would see the intermediate variable as several independent variables, in the sense of multiple causation. In this perspective, spatial misfits could be caused by the European policy, as well as by the characteristics of the place, but also by the multilevel implementation process, which encompasses the actor interaction process involving several actors with their own characteristics. All these factors would be alternative determinants influencing the dependent variable (King et al., 1994; Mackie, 1980; Ragin, 1989). However, this assumption ignores the possibility that the EU policy not only influences the spatial misfits but also affects the key actors, their characteristics, the interaction process, and the characteristics of the place. The key question is whether the influence of the EU policies on the process is so large that they can be considered the dominant cause of the spatial misfits.

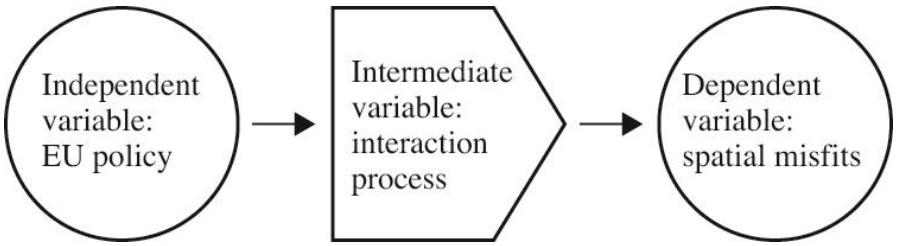

Figure 7. Simplified relationship of EU policy and outcome

Apart from the EU policies being an input, or context, of the implementation process, there are of course several others (see Figure 6). Does the connection of the implementation process to these other implementation contexts mean that the findings of our study are not generalizable beyond the cases? The answer is no: although the findings will vary due to the actors' dependence on the implementation context, and their own characteristics, the Contextual Interaction Theory and the concept of the place are applicable in other settings and conditions (Holloway, 2004). Within the limits of our extreme case sampling approach, a theory-based generalization beyond the cases studied is possible (Morse, 1994).

2.7.2 Data collection

Data collection commenced, following case selection, with the examination of secondary data. Initially, the four most read English-language newspapers in Malta between 2003 and 2011were studied: The Times of Malta, The Sunday Times of Malta, Malta Today and The Malta Independent. The newspaper articles were used to generate background knowledge on the five selected cases. Subsequently, to verify and fill in the background information provided by the newspapers, the Environment Impact Assessments of the projects (the sub-units of analysis) were studied. In the transport cases, an Environment Impact Assessment was lacking. To compensate for the missing data, the Feasibility and Environmental Impact Studies of the projects and a review of the proposed policy options were studied. The Environment Impact Assessments included summarizes of public hearing protocols, and these were used to identify and select responsible governmental actors and interested non-governmental stakeholders

and actors for the interviews. Further the public hearing protocol was also a useful secondary source of data to partly compensate and control interview information. In the transport cases, public hearing protocols were not included in the Feasibility and Environmental Impact Study, and therefore the non-governmental stakeholders and actors were identified from the newspaper articles and interviews. Furthermore, relevant national and European policies were examined: law and policy guidelines, papers and plans giving the policy direction. Additionally, to clarify and to gain a better understanding of the characteristics of the place, several scientific articles were read.

The other major source of information was primary data, involving two sorts of interview techniques, plus direct observations. The main method for data production was personal semi-structured interviews. The interviewees were selected based on to their involvement in the implementation process: they were either representatives of key actors (e.g. organisations) or key actors themselves. The interviewees were asked about the characteristics of the place, the policy implementation process, actor characteristics and the influence of the EU (Table 2). The questions were adapted to the situation and, if necessary, questions were added to check information from other respondents. Additionally telephone interviews and emails were used to clarify and verify some of the answers in the semi-structured interviews and to complete missing data from the personal interviews. The telephone interviews were often conducted using closed-ended and specific questions. Most interviews were recorded (43 out of the 45), with only two participants refusing to be recorded during their interview, when notes were taken. Requests to EU officials and parliamentarians had to be submitted by email, a requirement of the participants.

Topics	**Sample questions**
Place characteristics:	
Nature	Do the policies take the environment into account? Do environmental/planning regulations hamper the policy/project implementation? What impact has the policy/project on the environment?
Boundaries	Does the policy take into account Malta's geographical-spatial situation? Does Malta's size influence the development and policy/ project implementation?
Functions	Are there conflicting functions (users) on the place? Does the policy hamper a particular function (users)? Does the policy support a particular function (users)?
Values	What importance does the place (where the policy is implemented) have? Is the importance recognized by politicians/residents?
Implementation Process Actors characteristics:	
Capacity and power	Who is responsible for the policy implementation? What factors hamper the policy implementation? What factors support the policy implementation? Do you have the capacity (time, personal, money) to implement the policy?
Motivation	When did the government start to implement the policy? Why did the government start to implement the policy? Why did you get involved in the process?
Actor's interaction	How could you participate in the implementation process? How did you communicate with government/stakeholders?
EU influence	Is the EU crucial for the implementation of the policy? How important is the EU for you?

Table 2. Semi-structured interview list

After the personal interviews, some notes about the behaviour of the respondents were taken. The observations were necessary to test or confirm information from secondary data. For instance, several articles described the hierarchical structure in governmental entities and the importance of party loyalty. Hence, expressions of critical opinion could jeopardize one's career. Behavioural observations partly confirmed this information. For example, some leading officials did not want to be interviewed alone, but only in the presence of their supervisor. In some cases when the supervisor observed the participant, or suddenly entered the room, the participants would become insecure and would confirm their information through eye contact or questions. In another interview, the respondent wanted to drive around in a car to make sure that they remained unseen and unheard by others. Three other respondents declared that they would speak out because they would soon change their job position. One leader of a national NGO gave an interview but only releasing information which was published elsewhere. The NGO, which had no links to a larger international NGO, had just signed a contract with the government to co-manage a national park and did not want to risk the project. Another small national NGO did not want to give an interview at all.

In terms of missing data, only one out of the six aquaculture operators gave an interview. The others did not answer emails or telephone calls. As compensation for the missing data, members of the Malta Aquaculture Producers Association were interviewed. Some of the interviewed government officials did not answer the direct questions, but either repeated what was written in published papers or spoke about other projects. Some also gave wrong and misleading information. In these circumstances, interviews with other officials, sometimes from the same department, were carried out to check and to compensate for missing information. Some officials and local councillors responded very briefly to questions when they were recorded. After finishing the interview and the recording stopped, they started to speak more freely. This information was later summarized. Some missing data could be compensated for using secondary data, and this required different data analyses techniques as explained below.

2.7.3 Data analysis

The two research questions were answered through a content analysis. The content analysis enabled one to explore and to gather information about the implementation process and the place, and to gain new insights into the phenomenon of spatial misfits (Hsieh & Shannon, 2005). To aid management and organization, Nvivo, qualitative data analysis software, was used. This was used to code the same set of concepts in all five cases. This approach added consistency to the content analysis. The coding helped in making valid inferences from the written interviews, policy documents and newspaper articles (Krippendorff, 2005; Miles & Huberman, 1999; Weber, 1990). The first research question aims to identify spatial misfits. The initial step of the analysis was to conceptualize of the characteristics of the place. Subsequently, interviews, public hearings and policy documents, as well as newspapers, were coded based on these concepts. The place characteristics, boundaries, functions and nature, are descriptive codes (Miles & Huberman, 1999). The systematic content analysis was mainly based on policy documents, newspapers and interviews. However, the place characteristic values is a more interpretive concept and entailed some judgments because interviewees rarely

expressed their values, and newspapers, public hearing protocols and policy documents rarely state the values that actors and stakeholders bestow upon a place, and are more likely to describe their feelings, beliefs, attitudes and traditions.

To identify spatial misfits we examined whether the policy addresses and matches the characteristics of place as defined in Section 2.2. Using our definition, a policy spatially misfits with the place if the policy does not address the characteristics of the place where it is implemented. To ease a comparison, we simplified the policy and emphasized its physical subject: the roads, the wind parks or the aquaculture zone. These subjects were considered as a place, and compared to the place of implementation. For instance, in Chapter 3 the planned road is considered as a place, having boundaries, functions, nature and the values that people bestow on roads. These characteristics enable a comparison with the characteristics of the place where the road is planned to be built.

To identify whether a policy fits with a place, we measured whether the characteristics of the place were present in the policy. Additionally, it was important to determine if the characteristics of the place had the same meaning for the actors and stakeholders as expressed in the policy documents. We assigned one of three output values to the comparison. A spatial misfit (+) was attributed if the policy did not recognize the characteristics of the place, added a new characteristic, and/or had a different understanding of the existing characteristics of the place. A spatial fit (-) was seen if the policy recognized the characteristics of the place, included the same characteristics as the place, and/or had a similar understanding of the characteristics of the place. In some cases, the policy included the characteristics of the place but had a slightly different understanding, values were differently interpreted or boundaries only partly matched. In these instances, a partial spatial misfit (/) was attributed. The comparison can be illustrated in an effects matrix by policy sector and by case.

The second research question concerns the origins of a spatial misfit. The analysis uses two approaches: a variable-oriented approach combined with a process-oriented approach (Miles & Huberman, 1999). On one hand, the analysis was guided by our theoretical framework, as explained in Section 2.6, and assessed the variables and the relationships between the variables. On the other, the analysis was oriented towards the policy implementation process, examining the role of the actors in shaping the outcome.

The analysis starts with a word frequency count. The analysis related to the first question only shows how the actors and stakeholders understand the characteristics of the place, and whether the policy documents and newspaper articles recognize them. However this approach does not clarify the relevance of the characteristics of the place. A word frequency count indicates if the characteristics of the place are central concepts in the EU and in the national policy documents as well as in the newspaper articles. This technique is therefore considered as a valuable indicator of the relevancy of the characteristics of the place. The word count analysis only included key policy documents and newspaper articles. The results were used to help interpret the context of the policy implementation process and as support for the systematic content analysis. A systematic content analysis of the transcribed interviews and policy documents followed. The word frequency count analysis was done using Nvivo. The programme counts the number of times words are written in the policy documents and newspaper articles, divided by the total number of words in the documents. Given the lengthy policy documents and newspaper articles, the output list uses percentage values. Using a

keyword list, representing values of the characteristics of the place, we identified the presence of the characteristics in the policy documents and newspaper articles.

In the second part of the analysis, we used the Contextual Interaction Theory, the theoretical framework as detailed in Section 2.6, to identify the origins of the spatial misfit, rooted in an actor's interactions, but potentially strongly influenced by the EU policies. The theory does not only emphasise actors of the implementation process, and their key characteristics, but also stresses the mutual interaction of actors and the implementation context. The aim of the analysis was to detect relationships and patterns within the actors, the characteristics and the implementation context that could explain the occurrence of a spatial misfit plus the course and the outcomes of the policy implementation process. The approach is mainly based on the coding of the actors' characteristics. Subsequently, factors that influence the spatial misfit and the policy implementation process, and which recognize and agree on the characteristics of the place, were identified.

Chapter 3

The Trans-European Transport Network in Malta

3.1 Introduction

The Trans-European Transport Network (TEN-T) is part of the Trans-European Networks that include transport, energy and telecommunications networks. One of the main objectives of the TEN-T is to create a multimodal transportation network that interlinks the member states of the European Union (EU). It focuses on the integration of national transport networks and the stimulation of multimodal transport systems, as well as on the connection of peripheral regions to the central states of the EU. In total the network will comprise 89,500 km of roads and 94,000 km of railways, 210 inland ports, 294 seaports and some 366 airports in Europe by 2020. The programme defines thirty priority axes, where the upgrading and construction of roads, railways and waterways as well as of inland and seaports, and airports is needed. The 30 priorities were chosen according to their added-value and contribution to the sustainable development of transport in Europe. The European Commission (EC) expects that these projects to improve the economic efficiency of the European transport system and to benefit European citizens (EC, 2010b). The TEN-T is financed through the Cohesion Fund, the European Regional Development Fund (ERDF), the Trans-European Transport budget as well as loans and guarantees from the European Investment Bank.

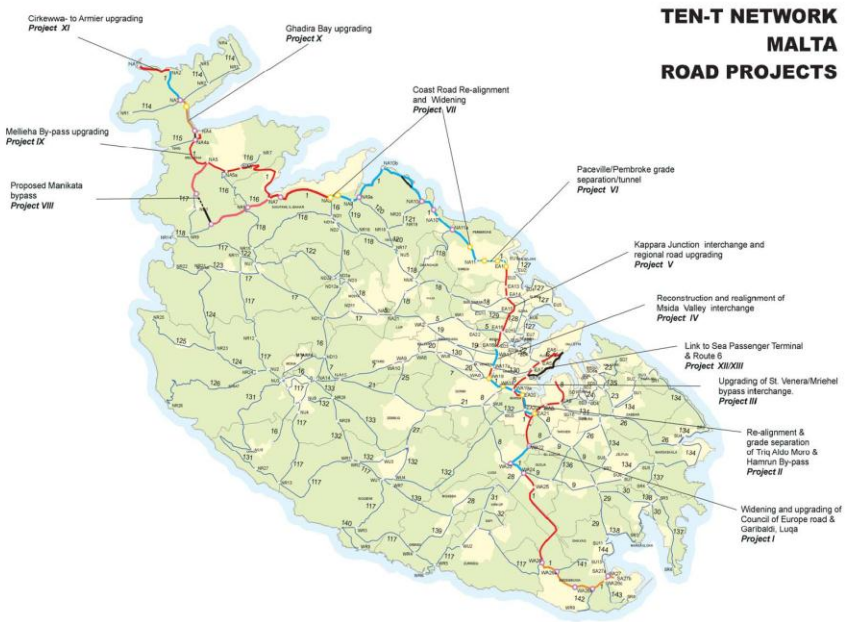

Figure 8. TEN-T Network Malta Road Projects
(Source: Malta Transport Authority)

With the accession of Malta to the EU, Malta became eligible to participate in the TEN-T network, although Malta's TEN-T project differs from the other EU TEN-T projects. Malta is a small island state, located in the centre of the Mediterranean Sea, 93 km south of Sicily and 290 km from the North African mainland. Malta's total area is only 316 sq km. Given Malta's size, the total length of the TEN-T road network, comprising 51 km of main roads and 45 km of access roads, is quite minor compared to the other EU TEN-T Projects (Figure 8).

In comparing the EU TEN-T policy with Malta's national TEN-T policy it seems that the EU policy is made for the large scale and does not take all the peculiarities of the small island state of Malta into account. Most of the thirty EU priority projects are trans-national, involving the cooperation of two or more EU member states. However Malta's TEN-T project involves no other country. Furthermore, more than half of the EU priority projects are focused on environmentally friendly transportation modes such as rail systems. Malta lacks rail and inland waterways and so the TEN-T policy is focused on air, road and sea transport. However, air and road transportation are major sources of environmental degradation: in the EU, road transportation is identified as the largest air polluter in terms of nitrogen oxides and non-methane volatile organic components, and air transport contributes more to air pollution than rail transport (EEA, 2008, 2011). Hence, from that perspective Malta does not contribute to the TEN-T objective of sustainable transport.

Malta's TEN-T policy is largely based on the 1998 National Master Plan of the Roads. Most of the roads included in the TEN-T policy are existing roads which need to be resurfaced, widened and/or reconstructed (GTZ, 1998). However, two TEN-T road projects involve the construction of two new roads, the Manikata bypass project VIII and the Ghadira Bay upgrading project X (Figure 8). These projects are not contained in the National Master Plan but are new initiatives from Malta's Transport Infrastructure Need Assessment (TINA), that identified Malta's TEN-T needs. These two projects are highly contested in public. Farmers and local residents have protested against the Manikata bypass and environmental organizations opposed the Ghadira Bay upgrading. The negotiations involving governmental and non-governmental actors was highly emotional in both cases. This is understandable if the place, as a geographical setting, of the policy implementation is recognised. For example, in Manikata, as in other Maltese villages, people are very loyal to their place of birth (Boissevain, 1996). Furthermore, the environmental assessments for the projects show that the projects will have adverse impacts on the environment of the areas (BCEOM, 2005a, 2005b). Natural areas are scarce in Malta due to the high population density. Green areas therefore have high recreational and natural value.

The experienced impact on the people, and the adverse impact on the environment, signals that the policy might not be in harmony or consistent with the spatial characteristic of the area. Therefore this study asks *to what extent does the Manikata and Ghadira TEN-T road policies spatially misfit with the place of implementation?*

According to our spatial misfit concept, a spatial misfit amounts to an incongruence of the implementing policies with the boundaries, the important functions, the nature as well as with cultural and other values of a place, which makes any or all measures inapt and/or inapplicable. However, a misfit is not conceived as unchangeable. During the policy implementation process, policy implementing actors can harmonize the policy though their interactions. For this reason it is important to understand the interaction

process of the key actors involved. Further, it is crucial to consider Malta's TEN-T policy in the context of the EU policy, and to locate the origins of any spatial misfit. The misfit concept, as found in Europeanization literature, originates at the EU level, and describes the incompatibility of EU policies and institutions with the national, and local levels. A misfit creates an "adaptational pressure" on member states and localities to change their policies and institutions (Börzel & Risse, 2000). As such, the European level affects domestic policies and politics. In the environmental policy literature, the cause of a misfit is often rooted in a shift in the governance style of a nation-state. Centralized bureaucracies, such as a nation state's central government or the EU commission, adopt a "one-size-fits-all" policy which does not in practice correspond with the social and ecological reality (Cumming et al., 2006).

In Malta's TEN-T policy, and especially in the Manikata and Ghadira road projects, this amounts to the national and EU policies not taking into account the peculiarity of the place, its boundaries, its important functions, its nature and its values. This view is based on a top-down perspective. According to the multilevel governance idea, the EU, national and local policy levels all influence each other. Hence we ask, *to what extent do the spatial misfits originate from the common European Trans-European Transport Network policy and/or from Malta's national multi-actor interaction implementation process*?

Initially, in Section 3.2, we illustrate the wider context, the creation of Malta's TEN-T policy and Malta's political and sociological situation, that establish the wider problem context. Secondly, in Section 3.3, we outline the structural context, the Manikata and Ghadira case specific actors, their targets and the governance structure. Next, in Sections 3.4 and 3.5, we emphasize the place of the implementation, as part of the specific context in the Manikata and Ghadira cases. We use the spatial misfit concept to analyse the appearance of spatial misfits in the two cases. Section 3.6 investigates the origins of the spatial misfits. Section 3.6.1 analyses the context of the implementation process and its three layers. Sections 3.6.2 and 3.6.3 describe the key actors and examine the actors' interaction processes in order to investigate the origins of the spatial misfits. Section 3.7 presents the main factors that stimulated spatial misfits. The chapter ends with Section 3.8, the summary and the conclusion.

3.2 The Maltese TEN-T before EU accession

The starting point of the Maltese TEN-T can be assigned to the European level. At the end of the 1980s, European policymakers identified the European transportation system as vital to the free movement of goods, people and services, and to the internal market. As such, TEN-T is not only considered as a physical connection and integration of the member states but also as a catalyst for economic growth and employment. The basic idea of the trans-European networks was established in the Treaty of Maastricht in 1992 which made the establishment and development of the network an important activity for the Community. In 1996, the European Commission and the European parliament adopted the first decision on establishing guidelines for the development of the TEN-T. The guidelines emphasized that TEN-T projects must have a common interest, combine various modes of transport and must take into account environmental protection. The

guidelines were set up to encourage member states to participate in the TEN-T project and to support the idea (EC, 1996b).

At that time, Malta was trapped in a political power struggle between two powerful parties, the Labour Party and the Nationalist Party. Malta's geographical size and high population density create an atmosphere where people know each other. Malta's political system is characterized by clientelism and a single transferable vote system with a high threshold that effectively divides the electorate into two blocks (de Miño & Lane, 1996). While the TEN-T idea was being concretized at the European level, on the Maltese level the Labour Party won the 1996 national election and froze Malta's application process to join the EU which had been negotiated under the former Nationalist Party's rule. Hence, it was not clear whether Malta would still join the EU. Malta's transport at that time was poorly systematized. Road construction was done according to local and national needs, and there was no single national plan or standards: the Transport Minister and Prime Minister decided on transport projects and priorities. Here, clientelism and the political party power struggle partly influenced the priority of road constructions and maintenance. For example, roads were only maintained for the duration of a legislation period of the party in power.

In 1998, after a snap election, the Nationalist Party regained power and resumed accession negotiations with the EU. Malta's government was striving for EU accession and this meant that it had to bring Malta's transport law and practices into line with European law. In the same year, Malta's first national road plan[1] was drawn up by apolitical German experts. For the first time, a report systematically listed all roads, identified bottlenecks and dangerous spots, as well as calculated the cost of standardization and maintenance of roads. The report also indicated the negative economic effects of Malta's poor road conditions on GNP, and on road accidents. The plan included a five-phase restoration programme (GTZ, 1998). Not only were local road users complaining about the bad road conditions, tourists were too, and the government was conscious of the importance of the transport network to the EU. The national road plan was the first step towards solving the quality issues with Malta's roads. However the government's financial and technical knowledge was limited. Financially and technically, Malta needed support from other countries. For example, in 1993, when Malta and Italy signed the fourth agreement for technical and financial support, Malta had no specialised road engineers or standards. The German engineers who had drawn up the report also started to train Maltese authorities on road engineering and road standards.

One year later, at the European level, in 1999, the EC published the final report on the Transport Infrastructure Needs Assessment (TINA). The EC recognized that intensive technical cooperation and financial assistance would be needed to improve the transport links between the candidate accession countries and the member states. The EU needed detailed information about the condition, network density and financial capacity of the candidate accession countries (EC, 2001c). Also in 1999, the EC stated in its regular report on Malta's progress towards accession, that Malta's road transport was not in line with the EU law because of various aspects including poor road safety (EC, 1999). The report signaled to Malta that it had to prioritise road safety in order to

[1] Master Plan for the Roads of Malta and Gozo by Deutsche Gesellschaft fuer Technische Zusammenarbeit (gtz).

be in line with EU law as soon as possible. In 1999, Malta also formally agreed to participate in TINA.

On the EU level, the EC initiated the Instrument for Structural Policies for Pre-Accession (ISPA) in 2000. This policy was launched to financially and technically support the candidate accession countries and also included TINA (EC, 2008a). In 2001, the Commission enacted a new directive which emphasized the role of railways and intermodal transport systems. Further, the EC and the Maltese government negotiated over Malta's transport and road legislation compatibility with EU law. The negotiations were closed in 2001. On the national level, the Maltese government reformed the governance structure for transport. The government enacted the Malta Transport Authority Act in 2000 and established the Malta Transport Authority (ADT) in 2001. Even though the Transport Authority falls under the portfolio of the Ministry for Urban Development and Roads, the government created a power sharing arrangement between the Transport Minister and the ADT. ADT became responsible, for land transport planning and design, traffic management and road safety, and for transport policy development. Thus, Malta's government was adapting Malta's road organizational structure according to the requirements of the European law. Given that Malta had only started to systematically train road engineers a few years earlier, the qualitative administrative capacity of the new authority was a challenge for the small island state. Staff were also Recruited from Germany, Great Britain and elsewhere.

In 2002, a transport infrastructure needs assessment was carried out in Malta. The assessment was supervised by TINA Vienna, an Austrian company, set up to implement the TINA regulations in all candidate accession countries and to technically assist the EC. The EU TEN-T guidelines created the framework for TINA. In the assessment cost estimates, traffic forecasts and economic developments for Malta were decisive in the definition of the network. Additionally, the time frame, with a deadline of 2015, was crucial (TINA, 2002). Even though Malta's government could propose measures to realize TEN-T objectives, the EU guidelines provided a clear framework. Hence, the Maltese actors to some extent had to negotiate and to justify their proposals. It should be noted, that during the TINA process, Malta's accession to the EU was still uncertain as a referendum on EU accession was planned for 2003. The fact that Malta's accession was undecided placed Malta's government at a disadvantage, as the European Commission was very cautious in approving funding for proposed projects. Further, the TINA experts also had to rely on the knowledge of the Maltese experts. Accordingly, the TINA was strongly based on the Master Plan for the Roads of Malta and Gozo. Malta's officials from the Transport Authority, and from the transport division of the Malta Environment and Planning Authority (MEPA), were involved in identifying Malta's TEN-T. Furthermore, a stakeholder and business consultation took place involving hotel owners, insurance companies and local councils. Non-organized stakeholders, such as residents and farmers, complained that they could not participate in the TINA process.

Malta's TINA resulted in an identified need to integrate Malta's airport, the seaports at Valletta, Marsaxlokk, Cirkewwa, Mgarr and Marsamxett, 51 km of main roads and 45 km of access roads into the European TEN-T (Figure 9). The network stretches from Victoria, the capital of the neighbouring island of Gozo to the port of Mgarr, the main port in Gozo, continuing with the main road between Cirkewwa, the Gozo ferry station on Malta, and the main passenger link to Gozo, and Bugibba, one of

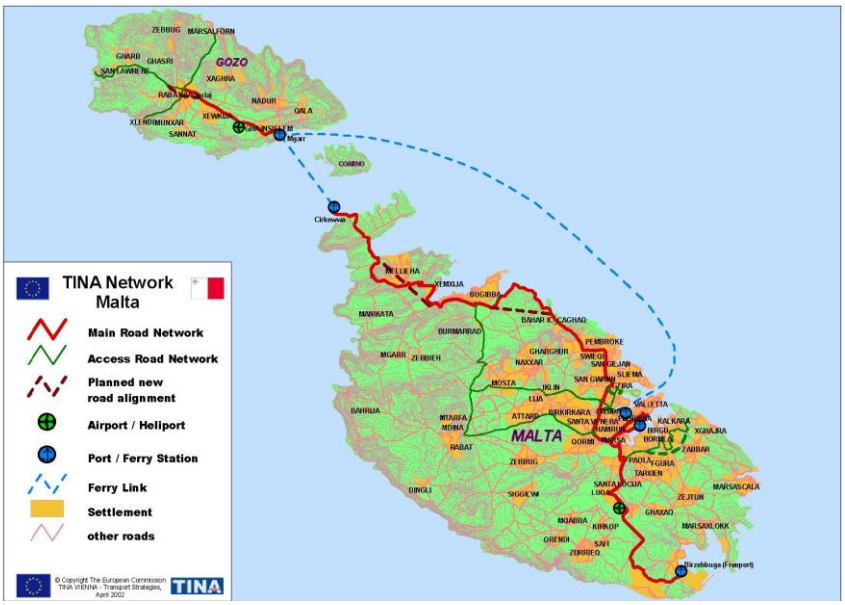

Figure 9. The Malta Trans- European Transport Network (Source: TINA, 2002)

Malta's largest tourist development and holiday resorts. The reconstruction of the main road continues through the tourist area of St Julians, to the main road between St Julians and Marsa, an important cargo and warehouse area in the Grand Harbour area. Further, the road between Marsa and Valletta, the capital of Malta, and the Passenger Sea Terminal in the Grand Harbour, as well as the main road between Marsa and the International airport at Gudja, and Malta's Freeport in Birzebbugia were included.

Although the roads do not link Malta directly to the European mainland, the airport and seaports are considered as nodes in the network. Tourism played a decisive role in the TINA negotiations. Malta has almost no natural resources and tourism is one of Malta's main sources of income. Tourism is regarded as a multiplier for Malta's economy as it does not only include the direct spending of tourists, but also many tightly-linked branches, such as the construction industry and food production. The TINA experts therefore stated in the TINA that tourism justified a high quality road network in Malta. In other words, Malta's road network became one of the priorities for Malta's tourism industry (TINA, 2002). Further, Malta's government has to cope with the rapidly increasing level of personal cars and the declining use of public transport. Traffic jams and road accidents were negatively affecting Malta's economy and, therefore, road safety, traffic management and better road connections became a high priority for the Maltese government (ADT, 2004). In 2003, Malta voted in a referendum in favour of EU accession.

Malta joined the EU together with nine other countries in 2004. On a national level, the Transport Authority published its Sustainable Land Transport White Paper in 2004, defining several basic transport policy objectives (ADT, 2004). Previously, the Malta Environment and Planning Authority (MEPA) had published a Transport Topic Paper, reviewing transport trends and developments (MEPA, 2003). As such, several authorities in Malta were involved in inventorying, evaluating and formulating proposals to organize, optimize, plan and make road transport safer. On the EU level, the EC reviewed the TEN-T guidelines and adjusted them to the new situation. This

revision emphasized Malta's geographical situation as an island. For instance, the directive stated that TEN-T should reduce the transport costs of island, peripheral and outermost regions of the EU. Malta is clearly covered by these aspects. Furthermore, the directive stressed that TEN-T should link islands and improve access to the centre of the EU. The directive also strengthens the importance of environmental protection (EC, 2004b). With the amendment to the guidelines, not only Malta's tourism justified Malta's need for a high quality road network but also Malta's economic, social and territorial disparities with EU metropolises and economically highly-developed founding member states. Following the accession, the negotiation position of Malta improved as Malta gained full member rights.

3.3 The implementation of Malta's TEN-T road projects

The implementation of Malta's TEN-T road network is planned in the TINA in three periods, from 2001 to 2005, from 2006 to 2010 and from 2011 to 2015. The prioritization of the road projects in the TINA is largely based on the 1998 National Master Plan for the Roads. The TINA is quite detailed and shows the major Malta TEN-T road network. However, the government only partly follows this plan as new road constructions and larger road developments need a full Environmental Impact Assessments (EIA) and full development permission from the Malta Environment and Planning Authority. The EIA requires several development options to be considered.

Several projects have already been implemented as shown in Table 3, it shows the implemented projects between 2002 and 2010.

Of the projects, two involve relatively large constructions of new roads, the Manikata bypass project VIII, and the upgrading and re-routing of the Ghadira Bay upgrading project X (Figure 8). The building of these roads was planned for the 2007-2013 period. Initially, the Manikata bypass project was planned to include a 6 km road from NA 7, at Xemxija to NA 5, at Ta' Pennellu. The project including the widening of the Triq Ghain Tuffieha and Triq il-Pwales and the rural road at Ta'Pennellu, and the construction of a new tunnel from Xemxija to Mellieha (Figure 10).

			TEN T Roads Reconstructed Between 2002 and 2010 in Malta and Gozo					
Route No:	**From Node**	**To Node**	**Street Name**	**Locality**	**Traffic Flow**	**Region**	**Road Classification**	**Length (m)**
			Ten T Roads in Malta - Cirkewwa to Birzebbugia					
1	NA7	NA8	St. Pauls's By Pass	St. Paul's	Bidirectional	North	Arterial	2682
1	EA12	EA13	Manual Dimech Bridge	Swieqi	Bidirectional	Central	Arterial	150
1	WA23	WA24	Civil Aviation Avenue	Gudja	Bidirectional	South	Arterial	650
1	WA26	WA26a	Hal-Far Road	Hal-Far	Bidirectional	South	Arterial	721
1	WA26a	WA26b	Hal-Far Road	Birzebbugia	Bidirectional	South	Arterial	1678
1	WA26b	WA26c	Hal-Far Road	Birzebbugia	Bidirectional	South	Arterial	977
1	WA26c	SA27	Hal-Far Road	Birzebbugia	Bidirectional	South	Arterial	217
			TEN T Roads Network in Gozo-Victoria to Imgarr					
1	GA35a	GA36a	Node GA35a To Heliport Junction	Ghajnsielem	Bidirectional	North	Arterial	620
1	GA36a	GA36	Heliport Junction to GA36	Ghajnsielem	Bidirectional	North	Arterial	680
1	GA36	GA37a	Imgarr Road	Imgarr	Bidirectional	North	Arterial	885
1	GA37a	GA37	Imgarr Road	Imgarr	Bidirectional	North	Arterial	598
1	GA37	GA38	Triq Ix-Xatt	Imgarr	Bidirectional	North	Arterial	301

Table 3. TEN-T roads reconstructed between 2002 and 2010 in Malta and Gozo
(Source: Malta Transport Authority 2011)

Figure 10. Initial Manikata bypass project VIII

To implement the project, the government needed to make use of agricultural land. Consequently, the reactions to the Manikata project mainly came from the local level, from farmers, and subsequently involved the national and European levels. Malta's traditional governance structure is hierarchical and centralised. Farmers and local residents were considered by the government as stakeholders, as people who would be affected by the implementation, but still they have few means to significantly influence the implementation. Nevertheless, in the Manikata implementation process, farmers and local residents became influential actors. They went against the conventions and organized and informed themselves.

The initial proposed reconstruction and upgrading of the Ghadira Bay Promenade comprised 1.53 km of road from the NA4 junction at the Seabank Hotel, Ghadira to the NA3 at Armier Junction. The reconstruction would include changing the dual carriageway to a wide single carriageway. The road project runs past the Ghadira Nature Reserve alongside the road section from the Danish Village to the Mellieha Bay Hotel. Furthermore the plans included a new road construction behind the Seabank Hotel and a tunnel at the Mellieha Bay Hotel site (Figure 11). In the Ghadira road policy implementation process, reactions started at the national level and involved the European level. The first reactions to the project came from Birdlife, the co-manager of the Ghadira Natura Reserve, an EU Natura 2000 site protected by the EU Habitat and Bird Directive (EC, 1979, 1992). Subsequently, other environmental and heritage NGOs, as well as opposition party members, opposed the government's TEN-T Ghadira project plans, considering the project to conflict with the Ghadira Natural Reserve.

Figure 11. Initial Ghadira Bay upgrading, project X

3.4 The Manikata bypass project VIII

Manikata is a village with a small farming community of forty families which forms part of the Mellieha local council area. The farming areas include the valley between Il-Ballut and Il-Manikata in the north of Malta (Figure 10). The Structure Plan, Malta's main land use plan, partly recognizes the area as an area of agricultural value. It is surrounded by touristicly important beaches at Ghajn Tuffieha Bay and Golden Bay, two of the few natural sandy beaches on Malta's northeast coast. With the construction of the Manikata by-pass, the government intended to shorten the road distance between the Malta Freeport in the south (Birzebbugia) and the Gozo ferry port (Cirkewwa) in the north. The new road development would decrease the volume of traffic at Xemxija Hill. The landscape makes the Manikata area very attractive for touristic developments. One of the most contested governmental touristic project proposals was for the development of a golf course. In order to protest against the golf course development, farmers and the local residents, for the first time, organized themselves in 2005. They protested successfully, together with other NGOs, and the golf course development plans where officially dropped in 2007. The government had proposed the Manikata by-pass at the same time as it proposed the golf course development. Further, large private investment plans were made to develop approximately 860 apartments at the Mistra Village Hotel Complex at Xemxia Hill.

In 2004, the year of Malta's accession to the EU, Malta's Department of Information published a summary of the TINA report but without any project details. As such, the general public was not aware of the detailed TEN-T policy. During the campaign against the golf course, some information about the Manikata bypass project became public in 2005, even though the Transport Authority had not yet published the TINA 2002 final report. An opposition party, outside of parliament, Alternattiva Demokratika – The Green Party had informed the public through the media about the Manikata bypass project. The project information came from the Feasibility and Environmental Impact Studies for Transport Infrastructure Projects in Malta – Final Feasibility Study Report, which was finished in 2005. The Malta Transport Authority did not regard the study as a complete Environmental Impact Assessment and therefore did not feel the need to consult the public. After the first appearance of information about the project in the media, a Member of Parliament from the Labour Party, the main opposition party, demanded parliament to publish details of the project and inform the public. However, the government did not publish any details as the planning was considered incomplete.

The farmers and local residents in Manikata started to protest against the development plans and started to send letters to the Transport Authority, the Malta Environment and Planning Authority, and to the Mellieha local council, and tried to get more detailed information on the plans. None of the authorities directly reacted to the demands of the farmers and residents. In autumn 2005 Alternattiva Demokratika – The Green Party brought the issue to the European Parliament, a possibility as part of the Il-Bajjad agricultural land in Manikata was involved in a European-funded agricultural project. As such, two European policies were conflicting in the Manikata case. The European Commission reacted and asked the national government to explain the situation. However, no government body reacted to the request. In spring 2006, the government held its first public consultation on the Manikata bypass project. The farmers and residents were invited to the consultation process through the Mayor of Mellieha. Until that moment, the local residents and farmers had not been involved in the process by the government. During the meeting, the farmers and residents of Manikata presented a statement paper, opposing the government's by-pass policy. The farmers and residents were well prepared and pointed out some incorrect information in the presented plans. Subsequently, the Transport Authority carried out an on-site inspection with engineers and started to investigate the possibilities of an alternative route. After another meeting, the Transport Authority indeed proposed another route in summer 2006. However the new route might conflict with the Mizieb aquifer, which is protected by national law and by the EU Water Framework Directive. Furthermore, environmental NGOs feared that the new route could have an adverse ecological impact on an area which functions as a buffer for the Simar Nature Reserve. Whereas the first route mainly raised opposition from the farmers and the local residents of Manikata, the new proposal also raised concerns from environmental NGOs.

Summary

Touristic development plans, such as the golf course and apartments at the Mistra Village Hotel Complex at Xemxia Hill, motivated governmental actors in planning the Manikata bypass. Additionally, European co-founding created an opportunity to finance this relatively expensive road project. However, the road construction seems a spatial

misfit with the agricultural use and vital natural functions of the area. Therefore, after next describing the characteristics of the place, Section 3.4.2 will then investigate the spatial characteristics of the Manikata area and the possibility of a spatial misfit.

3.4.1 The place characteristics of Manikata

To investigate possible spatial misfits, it is necessary to clarify the characteristics of a place, its important functions and nature, as well as cultural and other values of a place. Following this, in Section 3.4.2, possible spatial misfits are identified.

The boundaries
The institutional boundaries of the Manikata area are largely determined by the 1992 Structure Plan and the 2006 North West Local Plan which sets the framework for land use up to 2016. The plan designates parts of the Manikata area as of agricultural value and an area of high landscape and conservation value (MEPA, 2006). The Structure Plan prohibits any form of urbanization in these areas. Nevertheless, according to the planning, roads are not viewed as an urbanization facility. The term urbanization only covers buildings, such as shops, houses and factories. (MEPA, 1992). The agricultural area includes plots of land which are rented and farmed by several families. The existing roads in the area are rural roads with little traffic, producing little light, noise and air pollution.

The functions
The Manikata area has multiple functions. It functions as farm land, as a recreation area, as historical heritage and as a natural habitat. Farming is one of the traditional activities in Malta and a symbol of Malta's culture. The area also functions as a recreation area and people go walking, bird watching, hunting, cycling and camping in the Manikata area. Further, a number of historical and archaeological remains are located in the area. Moreover, the area is habitat to several wild flora and fauna. The natural underground water reservoir also has an important role in the hydrology of the area. The existing rural roads seem to be in harmony with the area as they do not interfere but support the function of the area. The rural roads connect farmers, residents and other users of the area to main roads. The small amount of traffic and the limited noise, air and light pollution allows recreation to take place.

The nature
Virgin nature is very rare in Malta. Virtually all of the land in Malta can be characterized by human interventions. Therefore, nature in Malta is often linked to the function of an area. The area around the village of Manikata is marked by semi-natural woodland, garigue and open shrubby vegetation. Further, the area has relatively small patches of cultivated farming land, partly separated using the typical Maltese rubble walls. The area possesses a natural ground water reservoir and the local plan has identified parts of the area as an aquifer protection zone (MEPA, 2006).

The values
The values of the area are partly institutionalized by the 1992 Structure Plan and by the 2006 North West Local Plan. These plans emphasize the importance of the scientific

value of the landscape, the economic value of the agricultural land, and its importance for Malta's biodiversity. The plans also stress the value of the area as part of Malta's cultural and archaeological heritage. Manikata as such has a symbolic value for Malta. The farmers and residents both bestow similar values on the Manikata area, although they might rank the values differently. The economic value is linked to the utilitarian value of the place but is not the same. The utilitarian value includes practical and material uses and the benefits which farmers and residents accrue from the place. These can be partly translated in economic terms, but some characteristics of the place have a high utilitarian value but a low economic value. The utilitarian value reflects if a function of the place is beneficial and useful for the users of the place. For example, for a famer a field has a high utilitarian value if the field produces good quality products.

Moreover, the farmers and residents also bestowed a humanistic value on the area as they emotionally felt strong affection and attachment to Manikata. According to the classification of ideas which influence the values, the value orientation towards Manikata is utilitarian, naturalistic, ecological-scientific, aesthetic and symbolic.

3.4.2 Spatial misfits in the Manikata project

After describing the characteristics of the place we can investigate whether the Manikata by-pass project spatially misfits with the existing characteristics of Manikata. As with the Manikata area, a road can also be understood as a place which has the same four characteristics. As such, the characteristics of a road, as place, can be compared to the characteristics of the Manikata 'place'. In the event of a spatial misfit, the characteristics of the planned road will not be congruent with the characteristics of Manikata. As such, the measures of the Manikata-bypass become inapt and/or inapplicable. This section investigates: *To what extent does the Manikata project policy spatially misfits with the place of implementation?*

To identify a spatial misfit, we compared the characteristics of the road with the characteristics of the Manikata area (Table 4).The subsequent sections elaborate the findings presented in Table 4.

Boundary misfit

Comparing the physical boundaries of Manikata with the boundaries of the planned road, it becomes clear that the road boundaries are determined by technical standards and Malta's TEN-T policy. The road construction would spatially change the property boundaries of the farmers. Farmers and residents would have to give up part of the land which they conceive as their own: the basis of their income and cultural identity. The land is owned by the government so that the road construction would not change property rights. Nevertheless, the road construction would partly change the user rights. This significantly influences the other characteristics of the place. Even though the road construction does not change all the boundaries of the area, and farmers would not have to give up all their fields, the possibly lower quality of their products and the loss of parts of the fields would seriously disturb the farming activity. Some parts of the rural road would be destroyed. This would remove boundaries which fitted into the area.

	Place	TEN-T Policy	
Characteristics	**Manikata**	**Road**	**Misfit**
Boundaries	**Institutional:**	**Institutional:**	
	Environment and Planning Authority:	Transport Authority	/
	Structure Plan		/
	North West Local Plan		/
	Land of Agricultural value		+
	Land of high landscape and conservation value		+
	Aquifer protection zone		+
	Geographical:	**Geographical:**	
	Fixed / permeable	Fixed /permeable	/
Functions	Agriculture	Traffic /Transportation	+
	Water reservoir		+
	Habitat		+
	Recreation		/
	Cultural heritage		/
Nature	Diverse flora and fauna	No flora and fauna	+
	Water reserve		+
Value	Humanistic		+
	Aesthetic	Aesthetic	+
	Utilitarian	Utilitarian	/
	Symbolic		/
	Naturalistic	Symbolic	+
	Ecologistic-scientific		+
+ Misfit	- Fit	/ Partly misfit	

Table 4. Manikata case comparison of place characteristics and identification of misfits

Another aspect of the road construction is the habitat fragmentation which would adversely influence biodiversity (Forman, 2003; Forman & Alexander, 1998). The current rural road in Manikata is little used. The new main road would create new boundaries for flora and fauna in the area. Further, the traffic-related noise, light and air pollution are not exclusively bound to the road but are transported far into the area. Thus only the physical road boundaries are fixed, the traffic-related effects are not. Accordingly, the road boundaries would create partial spatial misfit with the boundaries of the Manikata area.

Considering the institutional boundaries, the Manikata boundaries are managed by the Malta Environment and Planning Authority. While the road boundaries are managed by the Transport Authority. Once a road is built, the Malta Environment and Planning Authority has no ability to regulate the traffic according to environmental and residential needs. Despite the fact that a rural road already crosses the area, the new road partly misfits from an institutional point of view.

Function misfit

The Manikata area has multiple functions whereas a road has the only function to enable traffic. The road improves access to the area but takes away a certain amount of space and fragments the habitat, which limits the natural, farming and recreational functions of the area. In the Manikata case the farmers fear, and environmental impact studies confirm, that the construction of the road will partly seal the ground and that water will be channeled away through a drainage system. This affects aquifer recharge so that the ground exsiccates in the long term (Forman & Alexander, 1998). This would adversely affect the farming ground and the quality of the products. Therefore, one of the main functions of the Manikata area will be disturbed or risked through the planned road construction. The feasibility and environmental impact study of the Manikata bypass mainly focused on the flood risk during heavy rain, and the run-off of contaminated water from the roads. As such it concludes that the adverse effects of the road on

hydrology as low, as the planned drainage system will manage the water run-off and minimize the contamination of the ground with oil (BCEOM, 2005a). Further, some of the recreational functions conflict with the traffic-related noise, light and air pollution. This significantly affects the nature of a place. Studies show that contact with nature is vital for the human health (Maller et al., 2006).

Nature misfit

In terms of nature, every road is a sort of ecosystem even though a road often creates a barrier for flora and fauna. For example, at night and in cool weather, reptiles use the warm road surface, and are often killed by cars. The construction of the road might however have some positive effect for single species. For instance, some wild plants use the rainwater transported through the road and this improves the living conditions of those plants. However, for other sensitive flora, the sealing destroys the living conditions (Forman, 2003; Forman & Alexander, 1998). In the Manikata case, the road construction could risk the sensitive water balance as well as the quality of the soil. Traffic-related pollution will adversely affect the nature of the Manikata area. Studies have shown that the toxic components of exhaust gases from traffic are found in the soil, in Malta's flora and fauna, as well as in humans. For instance, samples of Malta's soil and vegetables from close to main roads had higher lead levels than soil from the countryside (Sammut, 1996). An increase in traffic influences human health. Several studies have found a correlation between asthma rate and traffic rate: people who live close to a road with a high level of traffic are more likely to suffer from asthma than people living far away from major roads (Schembri, 2007). Accordingly, the road construction would create a misfit due to the highly probably adverse impacts of the road construction and related traffic on the nature of the Manikata area.

Value misfit

The comparison of the various values shows that the values of a road are mainly rooted in utilitarian ideas. Roads are needed to transport goods and people, so the road enables access to the Manikata area. Roads in Malta also have a high symbolic value as they are considered as symbols of modernity. Further, the construction of the TEN-T is a symbol of Malta's connection to the main land and to the rest of the EU. In the Manikata case, the existing rural roads already have a utilitarian value for the farmers and residents as well as for tourists who want to visit the area. The new main road does not increase the utilitarian value according to local farmers and residents as well as many other Maltese people. Farmers and residents would not benefit more from the new road because of the traffic-related pollution. The conservation of the fields, nature and the typical rural Maltese landscape have a higher priority to them than improving the road network. In other words, humanistic values have a higher priority than the utilitarian and symbolic values of the new road. As such, the values of the new road are not aligned with the values of the Manikata area.

Summary

The analysis of place characteristics in the Manikata case shows that the proposed TEN-T project VIII spatially misfits. The road construction would significantly influence all the characteristics of the place. Even though the TEN-T policy measures would only partly misfit with the boundaries, due to the existing rural road, the construction of a

major road would increase the traffic and the related air, noise and light pollution in the area. The road construction would significantly disturb the agricultural and recreational functions of the area. Furthermore, the road would be not aligned with the existing values of the Manikata area, even though the road does have utilitarian and symbolic value. The existing rural road already has a utilitarian value, and the symbolic value of the Manikata area as an agricultural and traditional area is highly prioritized by the farmers and residents as well as by many other Maltese citizens.

3.5 The Ghadira Bay upgrading, project X

Ghadira Bay is the largest of Malta's natural sandy beaches, located in the northwest of Malta on the route to the Gozo ferry port. Currently the NA3 passes directly alongside the beach such that it functions as a beach-front boulevard. On its opposite side, the Ghadira Natural Reserve, an EU Natura 2000 site, adjoins the area, separated by a limestone wall from the NA3. The main touristic developments in the area are the Seabank Hotel, the Danish Village holiday complex in the southeast of the area and the Mellieha Bay Hotel, known as the Danish Village Resort, to the north. As with Manikata, the area comes under the Mellieha Local Council (Figure 11). Currently, in the summer season, the volume of traffic frequently creates traffic jams and the road is also used as parking space. Through the removal of the existing road, the government could also enlarge the beach. The government believes that it could upgrade the quality of the beach to a Blue Flag Beach, an eco-label awarded to beaches. Moreover, according to the government, the removal of the existing road will improve the natural flow of the sand dunes (BCEOM, 2004, 2005b).

In 2005, a Feasibility and Environmental Impact Study was carried out on behalf of the Transport Authority. The study was carried out without consulting environmental NGOs, including Birdlife, the Ghadira Natural Reserve's co-manager. In contrast to the Manikata bypass case, where information was published in 2005, the government only informed the actors and stakeholders in the Ghadira TEN-T project in a public meeting in spring 2006. In 2007, Birdlife had a bilateral consultation meeting with the Transport Authority and both parties agreed not to publish any information of the meeting as the talks only referred to preliminary ideas and plans. Other environmental NGOs and stakeholders, such as the Danish Village Resort management, only got to know about the project in mid-2008. The public nationwide protest and the objections by the opposition parties, documented by the newspapers, started in 2008. As such, the government did not involve all the stakeholders from the beginning of the project but only informed them at the stage where the Transport Authority had to carry out a full Environmental Impact Assessment. The EIA is a prerequisite for development applications to the Malta Environment and Planning Authority.

At the end of 2008, governmental and non-governmental actors stuck to their arguments and on blocking each other. Even though the Malta Transport Authority presented different options, Birdlife and the Danish Village Resort management, as well as several other environmental and heritage NGOs, opposed the original plan and also the development alternatives for the Ghadira Bay area. The opposing groups stressed that the project would have more adverse impacts on the area than beneficial ones, and that neither the Environmental Impact Appraisal nor the Environmental Impact

Assessment clearly showed that the removal of the road would be beneficial for the sand dunes. Further, the hotel owner feared that the long duration of the construction work would keep tourists away. The Danish Village Resort management indicated to the government that it would close the complex if the road development went ahead.

In January 2009, the Transport Authority submitted four development applications to the Malta Environment and Planning Authority, that had resulted from several meetings between the Malta Environment and Planning Authority, ADI environmental consultants and BCECOM engineers. In the same month the Restaurant and Hotel Association (MHRA) publicly expressed that they were in favour of the Ghadira Bay upgrading. In contrast, the opposing actors and stakeholders received support through a Labour Party representative in the European Parliament who contacted the European Commissioner for the Environment and reported concerns with the Ghadira policy. In May 2009, the Malta Environment and Planning Authority decided that only the on-line option, which retained the existing road, with limited upgrading as well as traffic and parking management, was "*prima facie* acceptable from a natural heritage point of view". The government did not inform Birdlife, other environmental and heritage NGOs or opposing stakeholders about this decision. In autumn 2009, environmental and heritage NGOs forced government to discard the Ghadira road rerouting and any new construction. In the event of a decision from the Malta Environment and Planning Authority in favour of the road rerouting and new construction, the environmental groups intended to report the case to the European Commission. At the end of 2009, the government declared that it had shelved the Ghadira Bypass upgrading plans.

Summary

The beach enlargement, the upgrading of the beach to an eco-label beach, and the anticipated increased attractiveness of the beach for tourists, motivated the government to remove the road alongside the beach. The EU co-funding provided the opportunity to finance a relatively expensive new road construction. However, Birdlife and other environmental NGOs feared that the construction of a new road would have adverse effects on the Ghadira nature reserve. The Environment and Planning Authority agreed with that concern. In comparison with the Manikata case, not only the functions of the place were affected by the road construction, but also the other characteristics of the place. Section 3.5.1 introduces the characteristics of the place, and Section 3.5.2 then investigates the spatial misfits.

3.5.1 The place characteristics of Ghadira

This section describes the characteristics of Ghadira, its boundaries, its functions, its nature and value in order to be able to compare them with the characteristics of the planned road.

The boundaries

Institutional boundaries are designated by the Structure Plan and by the 2006 North West Local Plan. The area, stretching from the east to the west coast, is one of the narrowest points of the island. The local plan designates the Ghadira area as coastal bay and a special area of conservation. Currently, the Triq il-Marfa (NA3) separates the sea from the land. On the sea side, the beach includes natural, very well developed sand

dunes. Even though the road creates a physical barrier for the sand dunes, the dunes frequently create sand-drifts on the road. The Structure Plan protects the sandy beach and the sand dunes. On the land side, the area hosts a Natura 2000 project site protected by European law. Additionally, the site is a Wetland of International Importance under the RAMSAR Convention.

The functions
The Ghadira area has multiple functions. Parts of the area function as agricultural land and the nature reserve has a natural and scientific function as it is also a bird sanctuary. The beach side is mainly a recreational area and an area of touristic importance. The Ghadira area has only two hotels, at each end of the beach, which makes it a quiet area compared to other touristic areas in Malta. A junction on the NA3 provides access to the Red Tower, a historical monument of historical heritage.

The nature
As with most places in Malta, the nature at the Ghadira site is partly man-made. Nevertheless, the area is an important habitat for grasses and thistles, and an important breeding ground for birds. The Ghadira saline marshland habitat is rare and hosts important brackish water fish, and several flora and fauna. The sandy beach has its own natural flora and fauna and provides habitats for protected and endemic beetles.

The values
Due to its rich nature, the Ghadira area has a high ecological-scientific value. The nature reserve and its bird sanctuary aims not only to conserve Malta's flora and fauna, it also serves research purposes. The area is important for the Maltese people for recreational purposes such as walking and bird watching, and therefore has a naturalistic value for many Maltese residents. The utilitarian value of the reserve for humans is lower than that of a field as they cannot directly exploit the area. Nevertheless, they indirectly benefit from the oxygen produced etc.. Additionally, environmental organisations have a strong emotional attachment to the area and bestow humanistic ideas on it, as one of Malta's few green natural areas. For many Maltese, the green area and the Ghadira beach have an aesthetic value. Further, the beach is a symbol of Malta's image as a sunny holiday island and has a high utilitarian value for Malta's tourism industry.

3.5.2 Spatial misfits in the Ghadira project

As in the Manikata case, this section compares the characteristics of Ghadira with the characteristics of the proposed TEN-T road construction. In the Ghadira case, the beach road removal has also been taken into account. The question is: *To what extent does the Ghadira project policy spatially misfit with the place of implementation?*

A spatial misfit would occur if the planned project changes the existing boundaries of the implementation place to such an extent that other key characteristics of the place are also significantly changed. Furthermore, a spatial misfit would arise if the change in the spatial boundaries changes the institutional boundaries, or vice versa. A policy measure can also misfit, if vital functions of the place cannot be exercised undisturbed, or are fully replaced or stopped by the policy measure. With regard to nature, a policy spatially misfit occurs if nature is adversely affected such that the health of people is put

at risk or biodiversity is reduced. Additionally a policy can spatially misfit if highly prioritized values that people bestow upon a place are replaced with less prioritized values. Table 5 compares the Ghadira place characteristics with the road characteristics and the identifies misfits. The subsequent sections elaborate on the findings presented in the table.

	Place	**TEN-T Policy**	
Characteristics	**Ghadira**	**Road**	**Misfit**
Boundaries	**Institutional:**	**Institutional:**	
	Environment and Planning Authority:	Transport Authority	+
	Structure Plan		+
	North West Local Plan		+
	Natura 2000		+
	The RAMSAR Convention		+
	Special area of conservation		+
	Geographical:	**Geographical:**	
	fixed / permeable	fixed /permeable	-
Functions	Nature reserve	Traffic /Transportation	+
	Agriculture		+
	Recreation		/
	Cultural heritage		/
Nature	Diverse flora and Fauna	No flora and fauna	+
	Nature reserve		+
Value	Naturalistic		+
	Ecologistic-scientific Humanistic		+
	Humanistic		+
	Aesthetic	Aesthetic	/
	Symbolic	Symbolic	/
	Utilitarian	Utilitarian	/
+ Misfit	- Fit	/ Partly misfit	

Table 5. Ghadira case comparison of place characteristics and identification of misfits

Boundary misfit

In the Ghadira case, the road construction would take land away from the conservation area determined by the Structure Plan. The land is owned by government so, in this case, the ownership structure would not change although the user rights would. The change to the boundaries would significantly affect other characteristics of the place and critically disturb or even destroy the main function of the area. Further, the road removal along the beach would other characteristics of the place and would fit with the place. From this point of view, the TEN-T partly misfits with the boundaries of the area. The road removal measure fits, while the construction of a new road misfits, with the Ghadira boundaries.

As in the Manikata case, the road construction fragments a habitat which adversely influences the biodiversity (Forman, 2003; Forman & Alexander, 1998). The road construction will create new boundaries for the flora and fauna of the area. The traffic-related noise and light pollution will especially disturb sensitive bird populations. Only the institutionally determined physical boundaries of Ghadira are fixed since fauna can cross these boundaries. The traffic-related effects are also not fixed. As such, the road boundaries partly spatially misfit with the boundaries of the Ghadira area.

Considering the institutional boundaries, the Manikata and Ghadira boundaries are both managed by the Malta Environment and Planning Authority. Institutionally, the Ghadira area is a national and international highly protected area. The road boundaries are managed by the Transport Authority which has no authority or knowledge to regulate traffic and light according to environmental needs. This means that the TEN-T project would spatially misfit with the institutional boundaries of the Manikata and Ghadira areas.

Function misfit

As described afore, the Ghadira nature reserve has multiple functions, but the planned main road is mono-functional. The expected high volume of traffic would not allow other functions than transportation. In the Ghadira reserve, which functions as a bird sanctuary, the road noise would disturb the daily life patterns of birds (Coffin, 2007). The natural condition is also linked to the recreational activities. The environmental impact studies of the areas confirm that that the road and the traffic noise will have significant effects. As such, the road will be highly adverse for the area (BCEOM, 2005a; MEPA, 2009a). The new road construction, and the road removal at the beach, would not critically disturb the functions of the beach. As such, the road construction partially misfits with the current functions of the area.

Nature misfit

With regard to the beach road removal, studies show that during the road removal at Ghadira beach and for a short term after, soil will be eroded. In some cases, the soil erosion could not be fully stopped following the removal of the road (Switalski et al., 2004). Other studies assess that the removal of the road would improve the conditions of the sand dunes (Pye & Blott, 2009). However, beach enlargement will very likely attract more human activities. Some of these activities, such as treading down vulnerable vegetation, is considered the biggest threat to the dunes (Axiak et al., 1998). Hence it is uncertain whether the road removal fits with nature, unless there is special protection of the dunes. In comparison, a road constructed close to the Ghadira reserve will significantly disturb its function. Therefore the first decision of the Natural Heritage Panel, part of the Heritage Advisory Committee of the Environment and Planning Authority, confirmed that the construction of a new road is unacceptable. As in the Manikata case, the road construction creates a misfit with Ghadira's nature.

Value misfit

In the Ghadira case, the removal of the road adjoining the beach would mainly contribute to the aesthetic idea of a natural beach and would increase the aesthetic and utilitarian value of the beach. However, the construction of a new road in the area partly conflicts with the naturalistic, aesthetic, ecologic-scientific and moralistic values that actors bestow on the Ghadira conservation area. The improved nature on a small piece of land, the beach, would put at risk a bigger area. In the Ghadira situation, many Maltese people prioritise the naturalistic, aesthetic, ecologic-scientific and moralistic values over the utilitarian and aesthetic values of the road construction.

Summary
The analysis of place characteristics in the Ghadira case shows that the proposed TEN-T project X does to an extent spatially misfit. The measure to build a new main road would significantly influence the characteristics of the place. The removal of the road would remove boundaries which fit with the characteristics of the area. However, the new road construction would critically disturb functions of the area as a bird sanctuary and recreational area. Further, the road construction conflicts with the prioritized values of the place.

Comparing the Manikata and Ghadira cases, in the Manikata case, the farming function would be significantly disturbed in the sense that farmers would have to give up some of their high valuable agricultural land and would very likely see the quality of their products fall. Further, the traffic-related noise, air and light pollution would disturb the recreational function of the area. Due to the spatial misfits of these characteristics, the measure to replace the rural road with a new main road is appropriate for managing the expected increase in traffic volume in the area but inapt for improving the social coherence and sustainable development as foreseen in the EU TEN-T policy. In the Manikata case, it was mainly the humanistic values, the historical and cultural identities that people bestow on the Manikata area that conflicted with the utility and the symbol of modernity provided by the road.

In the Ghadira case, the effects of the road construction were seen as so adverse as to endanger the function of the Ghadira area as a nature reserve. Even though the removal at the beach road fits with the characteristics of Ghadira, the new road construction spatially misfits with its characteristics such that the measure to build a new road in place of the old one is inapt. Nature conservation is valued more highly by Birdlife and other NGOs, as well as many Maltese citizens, than the beneficial aspects of the new road, such as fewer traffic jams.

As described in both the Manikata and Ghadira cases, policymaking and implementation was not a linear process. The government had to negotiate with the European Commission, and the protests by the farmers and residents, as well as by Birdlife, forced the Transport Ministry to review its plans and to propose alternative options. The next section examines the origins of the spatial misfit

3.6 Investigating the origins of the spatial misfit

After the identification of a spatial misfits in the Manikata and Ghadira road policy implementations, it is still uncertain where the spatial misfits originate: at the European, the national or the local policy level. Here, it is assumed that the misfit is produced during the policy implementation process, thus somewhere between the EU policy level, national and local policy levels. The following sections investigate the question: *to what extent do the spatial misfits originate from the common European Trans-European Transport Network policy or from Malta's national multi-actor interaction implementation process?*

To clarify the origin of a spatial misfit and explain the policy implementation process, the process is analysed using the Contextual Interaction Theory as introduced earlier. According to this theory, policy implementation processes are social-interaction processes that are determined by relevant actors and their core characteristics: their

motivation and cognitions as well as their capacity and power. Furthermore, the interaction processes are embedded in a context made up of several layers: the specific, the structural and the wider contexts. The examination initially analyses the implementation context as several factors from this context influence the actors' characteristics and vice versa. Subsequently, the actors, their characteristics and the interaction process are analyzed.

3.6.1 The implementation context

Several factors of the implementation context influence the actors' characteristics and the implementation process. An assumption in much of the Europeanization and the social-ecological resilience literatures that use a misfit concept is that the misfit has already originated in a poorly designed or incoherent higher level policy (Börzel & Risse, 2000; Cumming et al., 2006). This would mean, in the Manikata and Ghadira cases, that the spatial misfits originate in the EU TEN-T policy (structural context) and/or the Maltese TEN-T policy (specific context). Another assumption in the literature mentioned above is that the misfit originates in the hierarchical, top-down governance structure; that is in the wider context of the actors' implementation process. On this basis, the following sections investigate the three layers of the implementation context.

For this investigation, several interviews, the public debate as well as key Maltese TEN-T policy documents and the EU TEN-T policy are analysed. The reviewed key national policy documents are: the TINA report, the Manikata 2005 Feasibility and Environmental Impact Studies for TEN-T, and the review of the proposed Ghadira road options (specific context) (AIS, 2005; BCEOM, 2005a; TINA, 2002). Further, we considered the public discussion as reflected in the Maltese newspapers. The media was used by local actors and by opposition parties to raise their concerns with the policy plans. The government similarly informed the public through the media about its policy plans and responded to the public discussion. The public discussion forms part of the specific context, and influences various aspects including the cognitions of actors. The four most read general newspapers in Malta are the Times of Malta, The Sunday Times of Malta, Malta Today and The Malta Independent. Articles were selected based on the key words: Manikata, Xemxija, Ghadira, TEN-T, TINA, road construction and EU funding, from the period from 2002, the issuing date of the TINA report, until 2010. The wider context was investigated through semi structured interviews.

The EU Commission's key TENT-T policy documents analysed were: the EU guidelines for the development of the trans-European transport network and the White Paper on the European Transport Policy for 2010: Time to decide (EC, 2001c, 2004b). These documents form part of the structural context.

For the analysis of the documents and newspapers, we used Nvivo word-frequency count method. We assume that important words are used frequently and represent a certain characteristic of the place. The more often a word is used, the more that people are concerned about it. We assume that a misfit in the road construction triggers the concerns. Naturally, the same word can be used in different contexts and therefore the word context is involved in the analysis. The word frequency and the context indicate to what extent the characteristics of the place are generally recognized by the public discussion and the National and European policy. The word frequency can also be

understood as a hint of the misfit origin. A preliminary word frequency count of the newspaper articles and policy documents, and a subsequent content analysis of the surrounding words bring out the words which represent the characteristics of a place (Table 6).

Characteristic of the Place	Representative words
Boundaries	Area, areas Plan, plans, planning Zone
Functions	Agriculture, agricultural Aquifer Beach, beaches Farmer, farmers Field, fields Recreation Reserve, reserves, reservations
Nature	Environmental, environment Nature, Natura Water
Values	Archaeological Conservation Cultural Historical Impact, impacts Landscape Protection, protected, protecting, protect

Table 6. Words representing the characteristic of the place Manikata and Ghadira case

The specific context

The specific context in the case of the TEN-T road implementations comprise previous plans and decisions plus Malta's geographical-physical circumstances. That is, the characteristics of the place are part of the specific context. TINA is Malta's basis document for its TEN-T policy. Decisive documents in the implementation of the TEN-T road projects in Manikata and Ghadira are the "Manikata 2005 Feasability and Envrionmental Impact Studies for TEN-T" and the "Proposed review of Ghadira road options nodes NA3-NA4". Other important plans with regard to transport are the Sustainable Land Transport White Paper and the Transport Topic paper. Relevant general plans are the Structure Plan and the North West Local Plan. To investigate the origins of the spatial misfits, it is important to know if TINA and the impact studies take account of the characteristics of the place. It is assumed that a negation of the characteristics of a place indicate a source of the misfit.

The assessment of the frequency of the identified words, representing the characteristics of place (Table 6) and the surrounding text, show that the TINA report does not specifically take the place of implementation into account. The majority of the words that represent the characteristics of a place are not present in the report (Table 7). The most mentioned word in the report is "transport" (1.49). Considering the word contexts, the word "area", for example, which indicates the boundaries of a place, in most cases related to a geographical area but not directly to the specific area of implementation, Manikata or Ghadira. Another example is the word "plans": TINA does not mention the Maltese Local Plans and "planning" refers mainly to future plans which have to be made. The report does not refer to the Sustainable Land Transport White Paper or the Transport Topic paper. The functions of the place where the roads were to be built or widened were not recognized. With regard to the place characteristic of nature, the report acknowledges only once the environmental effects of the new

constructions, but mainly "environment" is used in its general meaning and not in the sense of nature. Finally the place characteristic "value", which can be represented by the word "impact", also has a different meaning in the TINA report. "Impact" is mainly used in the context of the road construction effect on tourism. The combination of "impacts" and "tourism" reflects the utilitarian value of roads in Malta. The TINA report does not include the word "impact" that often and does not show or estimate the impact of the TEN-T road constructions on Malta.

Place characteristics	**Representative words TINA**	**Word frequency* TINA**
Boundaries	Area, areas	0.25
	Plan, plans, planned, planning	0.43
Functions		
Nature	Environment, Environmental	0.30
	Water	0.06
Value	Impact, impacts	0.03

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Transport 1.49

Table 7. Represented place characteristics in the TINA report

Other decisive policy documents for the TEN-T road implementation in Manikata and Ghadira are the impact studies. In the Manikata feasibility and environmental impact study, the most frequent word is "impact" (1.88) (Table 8). In the 2005 Ghadira impact study, the most frequent word is "option" (1.16). In terms of characteristics of place, the boundaries of the place are recognized in both studies. In the Manikata study, for instance, the word "plans", indicating the boundaries of the place, is used in the context of the Structural, Local and Action plans. The functions of a place are less recognized based on the word frequency count, although the study does mention the impact of the bypass on agricultural land. The report does not recognize the area as a recreational area. The characteristic nature is, according to the word frequency, very important. "Environment" is the second most frequently used word. Often "environment" refers to the title of the study but it is also used in the sense of nature. In comparison, the values of the place are less recognized by the report as it fails to recognize the several values that users bestow on the place despite, in the Manikata study, the most frequently used word is "impact". The term mainly refers to the study itself or to other impact studies. Furthermore "impact" usually refers to environmental effects in general. In a few cases the word "impact" refers to socioeconomic, agricultural and visual impacts.

In comparison, in the AIS Ghadira road options review, the word frequency analysis identified the word " area" as very important (Table 8). The investigation of the context shows that "area" often refers to the special area of conservation as well as to the area under consideration. Hence "area" is used in the geographical sense, and identifies the boundaries of a place. The report recognizes the importance of several functions of the place as the words representing "agriculture" and "beach" have a relatively high frequency. Although the frequency of words representing the place characteristic "nature" is low, the report does recognize nature. Finally, the values of the place are also recognized. As in the Manikata report, the frequency of the word "impact" is relatively high. The context shows that the word is mainly used in the sense

of describing the effects on the Ghadira area. It is also worth noting that the report recognizes the archaeological value although the frequency shows that this topic is less important.

Place characteristics	Representative words EIA Manikata	Word frequency* Manikata	Representative. words AIS Ghadira	Word frequency.* Ghadira
Boundaries	Area, areas	1.05	Area, areas	1.01
	Plan, plans, planning	0.61	Plan, plans, planning	0.16
	Zone	0.07	Zone	0.11
Functions	Agriculture, agricultural	0.26	Agriculture, agricultural	0.58
	Aquifer	0.05	Beach, beaches	0.61
	Recreation	0.03	Field, fields	0.20
	Reserve, reserves, reservations	0.03	Recreation	0.06
			Reserve, reserves, reservations	0.16
Nature	Environmental, environment	1.76	Environmental, environment	0.27
	Nature, Natura	0.16	Nature, Natura	0.22
	Water	0.17	Water	0.46
Value	Conservation	0.12	Archaeological	0.21
	Cultural	0.14	Conservation	0.07
	Historical	0.02	Cultural	0.09
	Impact, impacts	1.88	Historical	0.09
	Landscape	0.31	Impact, impacts	0.53
	Protection, protected, protecting, protect	0.39	Landscape	0.24
			Protection, protected, protecting, protect	0.26

* Word frequency weighted percentage out of the 1000 most frequent words
Manikata, highest word frequency: Impact 1.88 Ghadira, highest word frequency: Option 1.16

Table 8. Place characteristics represented in Manikata and Ghadira impact studies

The fact that some characteristics of the place are not represented in the TINA indicates that governmental actors are not focused on the characteristics of the places. Rather, the technical and economic aspects of the transport network are important. The report also does not refer to Local Plans, the Sustainable Land Transport White Paper and the Transport Topic paper, which can be interpreted as a lack of coherence with existing planning. Additionally, the word frequency count provides some information about the motivation of governmental actors: namely, the importance of tourism. Given the interaction of the specific context and the actors, it is reasonable to conclude that the TINA report had a significant impact on the governmental actors. Tourism in general, the development of approximately 860 apartments in Xemxija and the beach enlargement at Ghadira bay, motivated the governmental actors to prioritize the Manikata and Ghadira projects. Unlike the TINA, the Manikata and Ghadira impact studies do recognize the boundaries of the place, its nature, and some of its functions and values. The studies confirm the adverse impact on agricultural land and nature, as well as the visual impact, indicating that the TEN-T policy in the Manikata and Ghadira cases is not harmonized with the area.

Another important element of the structural context is the public discussion in the media. The media is not considered as a direct actor in the implementation process but as a factor that influences the perspectives and goals of the actors. Using the word frequency count approach, we investigated whether the public discussion recognized the characteristics of the place. Table 9 shows that, in the Ghadira case the boundaries are of a bigger concern than in the Manikata case. This reflects the fact that in the Ghadira case, a clearly demarcated Nature Reserve and beach would be affected by the road

construction. In the Manikata case, the boundaries are less clear as several fields would be affected by the road construction. Considering the word contexts, the analysis shows that, in the Manikata case, the term "plan" mainly refers to the Structure Plan and the Local Plans which define the protection policy for the entire area. In comparison, the term "plans and planning" in the Ghadira case mainly refer to governmental road planning. The protection of the nature reserve is already regulated by national and international law. With regard to the other characteristics of place, the functions, the nature and the values, the newspaper articles mainly reflect the function of the fields as farming land and as an agricultural area. Other functions of the area such as recreation are not recognized in the public discussion in the newspapers. In the Ghadira case, the newspapers stress the function of the beach and the nature reserve. In both cases, the characteristic nature is recognized such that the newspaper articles reflect the public concern about the environment. Considering the values, the words "protection" and "impact" have a high word frequency. In both the content analyses, "impact" is a representative word mainly used in the context of negative impacts on the natural and social environment. This shows that the general public recognized some sort of spatial misfit in the policy.

Place characteristics	Representative words Manikata	Word frequency* Manikata	Representative words Ghadira	Word frequency * Ghadira
Boundaries	Area, areas	0.61	Area, areas	0.42
	Plan, plans, planned, planning	0.43	Plan, plans, planned, planning	0.86
	Zone	0.03	Zone	0.03
Functions	Farmers	0.86	Beach, beaches	0.83
	Field, fields	0.34	Reserve, reserves, reservations	0.52
	Agricultural, agriculture	0.28	Field, fields	0.03
	aquifer, aquifers	0.04	Agricultural, agriculture	0.04
	Recreation	0.02	aquifer, aquifers	0.01
	Reserve, reserves, reservations	0.18		
Nature	Environment, Environmental	0.49	Environmental, Environment	0.96
	Natura	0,09	Reserve	0,50
	Water	0.27	Nature, naturally, natural	0.57
			Natura	0.09
			Sand	0.28
			Dune, dunes	0.13
			Water	0.13
			Bay	0.35
			Habitat, habitats	0.06
			Species	0.02
Value	Archaeological	0.04	Impact, impacts	0.40
	Conservation	0.02	Conservation	0.09
	Cultural	0.04	Protection, protected, protecting, protect	0.32
	Historical	0.03		
	Impact, impacts	0.38		
	Landscape	0.06		
	Protection, protected, protecting, protect	0.26		

* Word frequency weighted percentage out of the 1000 most frequent words
Manikata, highest word frequency: Roads 1.88
Ghadira, highest word frequency: Roads 3.28

Table 9. Manikata and Ghadira case, place characteristics, represented in newspaper articles

The fact that the general public, as represented in the media, recognize a spatial misfit is important for the entire implementation process as the public discussion is a crucial way

to participate in the implementation process for stakeholders and other actors. Malta's governance structure is very hieratical and centralised. The Office of the Prime Minister controls several core departments. Policy implementation depends on the few available national experts (Muscat, 2005; NSO, 2006). Due to the centralised governance structure, a small network of trustworthy civil servants is entrusted with the implementation of the TEN-T policy. The local level in the TEN-T policy implementation process, represented by the Local Council of Mellieha in both cases, does not have the power to decide. The local council has the right to advise the Transport Authority and to assist the residents of the locality by explaining residents' rights and the projects. In the Manikata and Ghadira cases the Mayor informed the stakeholders about the public consultation process but was subsequently bypassed by the actors.

The structural context

The structural context refers to the governance structure: its levels, scales, networks and actors in general. Further, perspectives, goal ambitions and strategies are part of the structural context. The EU TEN-T policy is viewed as part of the structural context as it influences a specific case context but is not the main guiding policy in the Manikata and Ghadira project. Additionally, the public discussion in Malta's media is part of this context, expressing perspectives, opinions and goal ambitions.

It is not important to investigate if the EU policy recognizes the functions and boundaries of a place but it is important to investigate whether the policy recognizes boundaries and functions in general. Here, the analysed documents are: the EU guidelines for the development of the trans-European transport network and the White Paper on the European Transport Policy for 2010: Time to decide. The word frequency count analysis shows that the most frequent word in the EU TEN-T guidelines and the White Paper on Transport is "transport" (1.55 weighted percentage), a score which indicates a high importance.

Place characteristics	**Representative words TEN-T EU policy documents**	**Word frequency***
Boundaries	Area, areas Plan, plans, planning	0.17 0.22
Functions		
Nature	Environmental, environment Nature, Natura	0.16 0.05
Value	Impact, impacts Protection, protected, protecting, protect	0.10 0.05

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Transport 1.55

Table 10. Place characteristics represented in key EU TEN-T policy documents

Table 10 shows that the frequency of words representing the place is relatively low. The content analysis shows that the EU policy is focused on the TEN-T network as such, but not on the places of implementation. In comparison, the most frequently used words include transport, roads, rail, communication, member states, development and services. The boundaries, nature and value are mentioned but have not as often as other issues. The comparison of the EU documents with Malta's TINA, shows that both documents

are orientated towards economic development and functional aspects of transport. The National TEN-T policy must be accepted to obtain EU funding and therefore must be in line with EU policy. This could explain why Malta's TINA and the EU policy documents stress the same aspects and ignore the functions and values of a place.

The wider context

As indicated earlier, the wider context refers to the problem, the political, the economic, the cultural, and the technological contexts. The wider context influences the other two contexts and vice versa. On a small island like Malta, mobility has huge importance. Car ownership in Malta is one of the highest in Europe. For many Maltese people, transport is the highest area of expenditure (MEPA, 2003) The condition of the roads is, to many Maltese an indicator of modernity and welfare. Accordingly, road safety, road construction and maintenance are high on the political agenda. The importance of roads frequently becomes visible during election time. In the opinion of the general public, road maintenance and transport-related construction, such as a public car park, are always carried out before an election to show the progress of Malta. The political parties use the transport policy during election time to win over the electorate. In the political struggle between the two largest political parties, the Nationalist and the Labour Party, road projects such as Manikata and Ghadira are used to discredit each other. This influences the governmental actors. Malta's governance structure is very centralised and hierarchical. The Prime Minister, who has a very strong and powerful position, made transport one of the national priorities. The Transport Minister has to seek funding, as tax increases would have an adverse effect on the Nationalist Party's chances of winning the next elections. The limited resources, finances and technical knowledge have always forced ministers to seek and accept bilateral agreements with other countries to finance its road maintenance and to acquire knowledge. However, the threat to Malta's environment and health through the high rate of car ownership is another "hot topic" and high on the political agenda. Many Maltese people do not want to have more roads in exchange for nature, but rather improved traffic management and road safety. This opinion is reflected in the media. The analysis shows a large concern about the environmental impact of the Manikata and Ghadira road constructions.

Summary

Considering Malta's TEN-T Manikata and Ghadira projects in terms of the Contextual Interaction Theory, the analysis of the implementation contexts with its three layers, namely the specific, the structural and the wider contexts, shows that the spatial misfit partly originated in Malta's main policy document TINA (specific context). The policy is oriented towards economic, touristic developments and technical and safety aspects, and largely neglects the characteristics of the place. This influences the cognition and the motivation of actors to implement or adjust the policy. However, the Manikata and Ghadira impact studies do partly recognize the characteristics of the place. This means that governmental actors were to an extent conscious about the spatial misfits of the projects. Additionally the media (specific context) reflected the view that the policy was not harmonized with the Manikata and Ghadira area. Nevertheless, the Transport Ministry still wanted to implement the policy as planned, which indicates that the spatial misfit is partly rooted in the actors' interactions. Furthermore, Malta's transportation and the road network are high on the political agenda and an important

aspect of Malta's culture and economy (wider context). This provides an explanation as to why the Transport Ministry wanted to implement the policy at the beginning of the process. As with TINA, the EU TEN-T policy and guidelines (structural context) do not recognize the characteristics of the place. The focus is on transport, roads, rail, communication, member states, development and services. The similarity of the EU and the national policies indicates that the EU policy significantly influenced the national TEN-T policy. Nevertheless, despite the EU influence, Malta's governance structure remains hierarchical and centralised. The analysis of the context could not fully explain the origins of the spatial misfit. Therefore, Section 3.6.2 describes the actors and subsequently 3.6.3 analyses the characteristics of the actors in the interaction process.

3.6.2 The actors

The next subsections introduce the actors in the implementation process in the Manikata and Ghadira projects. Although we have investigated two cases in the analysis of the interaction process, we here treat the Manikata and Ghadira cases as one case. The reason is that the cases are tightly linked together: involving almost the same actors, starting at the same time, and in the same local district.

The Malta Ministry for Infrastructure, Transport and Communication
One of the main actors in the Trans-European Transport Network implementation is the Minister for Infrastructure, Transport and Communication. The Minister controls and directs the Transport Authority, which is another key actor of the implementation process (Gov, 1964, 2000b). During the completion of the TINA, the Minister of the former Ministry for Transport and Communications was the main actor responsible since the Malta Transport Authority was newly established and still in the process of capacity building (ADT, 2002). The Ministry was renamed and resourced after the 2008 general election as the Ministry for Infrastructure, Transport and Communication. During the implementation of Malta's TEN- T road network, three Ministers were responsible: 1998 to 2004 Censu Galea; 2004 to 2008, Jesmond Mugliett; and 2008 untill present, Austin Gatt. The current minister Gatt, was previously Minister for Investment Industry and Information Technology. Officially, the Ministry is not only responsible for coordinating road building and maintenance; the Minister also advocates for the national interest with the Malta Transport Authority and the other regulatory transport bodies: the Civil Aviation, Malta Maritime Authority and the Malta Freeport Corporation. The Minister is entitled to appoint the members and designate the Deputy Chairman of the Transport Authority, and to remove members of the authority if they are unfit to fulfil the office in the Minister's view (Gov, 2000b). Hence, from the legal point of view the Minister is the main responsible actor in Malta's Trans-European Transport Network. Nevertheless, the Minister depends on the advice and the work of the Malta Transport Authority. He is also obliged to take the interests and policies of other ministries into account.

The TEN-T network in Malta is a national priority. In the Manikata and the Ghadira road projects, the Ministers themselves were involved in the public consultation process and directly negotiated with other actors and stakeholders. In the Manikata case, the Minister made it clear that decisions are only made after the consultation process with the Malta Environment and Planning Authority and the Transport Authority. Moreover,

the Minister heavily depends on the decisions made by the Malta Environment and Planning Authority. As such, plans are considered preliminary until this authority agrees to the official development application. The Transport Authority's main tasks are to propose the course of the road and give technical advice. Nevertheless, the Minister has the final word as, in both cases, the implementation of the plans were stopped by the Minister's decision.

The Malta Transport Authority

The Malta Transport Authority is another key actor in the implementation of the TEN-T. The government established this authority by enacting the Malta Transport Authority Act in 2000. However, the authority did not start operating until 2001. With the creation of the authority, the government was responding to the request in the 1992 Structure Plan for better co-ordination of transport policies. Before the creation of the authority, the policy making and implementation bodies were fragmented, and the policy implementation could be characterized as ad hoc. The maintenance and construction of roads was carried out according to needs, to safety and to satisfying certain interests (Attard, 2005; MEPA, 2003). Currently, the Transport Authority falls under the Ministry for Infrastructure, Transport and Communication. The Malta Transport Authority advises the Minister and is entrusted with guaranteeing an efficient, safe and economic transport system. It is responsible for the development and implementation of transport policies. This includes implementing the transport strategy, network management, ensuring safety standards and regulations, and the maintenance, reconstruction and construction of arterial and distribution roads (Gov, 2000b).

Even though the authority was established to create a single body responsible for the management of the entire road transport system and the road network, the organisational structure of the authority is still fragmented (Attard, 2005). The authority comprises five departments: Transport Planning, Public Transport, License and Testing, Network and Infrastructure, and Corporate Services as well as an Executive Office. The tasks are spread and not always well coordinated. Additional functional fragmentation and partial overlap of tasks occurs through the other important key actor in the trans-European transport network: the Transport Planning Unit of the Development Planning Directorate, which is part of the Malta Environment and Planning Authority (MEPA).

With regard to Malta's Trans-European Network, the Transport Authority is officially responsible for the detailed project planning and the ordinary implementation of the projects involved, including the preparation of plans and strategies, Environmental Impact Assessments, the submission of projects to the Malta Environment and Planning Authority for development permission, and for public consultation. Nevertheless, in reality, its responsibility is limited. The authority has no real power to finally decide on projects of national interest such as the Manikata and Ghadira road projects. In reality, the Authority is more of a guiding actor for the Minister. In the Manikata and Ghadira cases, the Authority could only hold public consultations once the road project targets were determined by the Minister. As such, they can be considered as a sort of mediator between the Ministry and other actors and stakeholders.

The Malta Environment and Planning Authority

The Malta Environment and Planning Authority was established in 1992 by the Development Planning Act. Since the 2008 general elections, the Malta Environment and Planning Authority falls under the Office of the Prime Minister. According to the law, the authority is responsible for planning land use and controlling development (Gov, 1992). In that respect, it developed and published the long-term 1992 Structure Plan. The Structure Plan is a comprehensive development and land-use plan and contains several transport policies. Given that, in 1992, a central transport policy and a single transport managing body was lacking, many policies of the Structure Plan go beyond the legislative planning task of the authority (MEPA, 1992). In 2003, the Malta Environment and Planning Authority published a Transport Topic Paper which reviews and sets out the transport objectives of the authority. The authority has its own Transport Planning Unit, falling under its Planning Directorate. The directorate is legally responsible for transport planning and traffic management, and has to approve development permissions as well as review and update the transport framework in relation to the Structure Plan and detailed Local Plans (MEPA, 2008).

In relation to Malta's TEN-T implementation process, the Environment and Planning Authority was involved in the planning process from the beginning. The authority frequently met and consulted with the Transport Authority and the external consultants who carried out the Environment Impact Appraisals and assessments, to inform these actors in the implementation process about the environmental aspects of the planning. The authority was also present during the public consultation processes in the Manikata and Ghadira cases. In the Ghadira case, the authority received a full development application and decided against most of the options due to their adverse environmental impacts. The Transport Authority and the Minister accepted the decision and shelved the project. From that point of view, the Environment and Planning Authority is a powerful actor.

The Office of the Prime Minister

The Office of the Prime Minister is a key and maybe even the overreaching actor in the implementation process of the Trans-European Transport Network. The Office is within the portfolio of the Prime Minister and controls and directs strategically important policy areas. The Prime Minister has, for example, direct responsibility for the Malta Environment and Planning Authority, for the Malta Tourism Authority and for the Council for Economic and Social Development, three authorities fundamental to ecological and socioeconomic development. Further, the Office supervises and coordinates European Policies, such as internal planning priorities and funding. The Prime Minister decides the general national policies and advises the Ministers (Gov, 2008). The Office of the Prime Minister coordinates the priorities of its portfolio with the priorities of other Ministries.

With regard to the Manikata and Ghadira, the Office of the Prime Minister was closely involved in setting project targets and coordination. In May 2007, a year before national elections, the Prime Minister and the Environmental Minister opened a National Park in the Manikata area and visited the farmers' NGO Koperattiva Rurali Manikata. The visit demonstrates the personal involvement of the Prime Minister in the case. The Prime Minister and the Environmental Minister demonstrated a friendly relationship with the farmers and therefore some support for the farmer's opposition.

The positive appearance of the Prime Minister also indicates that environmental protection is relatively high on the political agenda. Considering the fact that the Prime Minister has a strong position and advises other ministers, the visit to the farmers' and other environmental NGOs can be understood as a signal that the Prime Minister was trying to avoid conflicts with these groups and boost his environmental credentials.

Non-governmental Maltese actors in the implementation process

In the Manikata case, it can be viewed that the farmers' NGO Koperattiva Rurali Manikata exerted direct influence on the decision of the Ministry for Infrastructure, Transport and Communications. They directly spoke with the Minister and with the Prime Minister and successfully opposed the implementation of the Manikata bypass project VIII. The NGO had initially been set up by farmers and residents to protest against the development of a golf course in 2007. The main purpose was to safeguard the environment and the culture of the region. The organized cooperation among farmers and residents, and the subsequent setting up of an NGO, went against the traditional code of conduct. The government is the owner of farming land, which it leases out to farmers. Furthermore, the traditional hierarchical structure of Maltese society, places farmers in a social position where they are usually subservient to the government's decisions. However, the construction of the golf course and the by-pass would have destroyed their basis of existence. The successful setup of the NGO turned individual farmers into a more powerful actor in the implementation process.

In the Ghadira case, Birdlife, as the co-manager of the Ghadira Nature Reserve, is an actor of the Ghadira Bay upgrading project X. The environmental NGO is part of an international Birdlife network which is partly financed by the EU Commission. The Maltese Birdlife descended from the Malta Ornithological Society and is one of Malta's oldest environmental organizations. In the Ghadira case, the organization had personal contacts with the Transport Minister and the Transport Authority. The Ghadira Nature Reserve belongs to the government and is co-managed by the NGO. Nevertheless, in the TEN-T road implementation process, the NGO was treated in much the same way as any other NGO by the government. This means that its main influence on the project was through the public consultation process and the media.

European-level actors

The European Commission conceives itself as an actor in the TEN-T implementation process within the EU. The Commission, together with the European Parliament, sets the guidelines, standards and timeframes of the TENT-T policy. Additionally, the EU offers co-funding of national projects. A delegation of the EU Commission is located in Malta to assist Malta's government with EU policy implementation. Furthermore, the EU Commission's TEN-T Executive Agency controls project applications and achievements, as reported by Malta's Transport Ministry. The Agency determines to what extent Maltese projects contribute to TEN-T objectives such as increasing mobility, economic development and connection to other EU member states. Hence, the EU commission does not set national road policy goals such as the construction of the Manikata by-pass and the re-routing of the Ghadira road. Nevertheless, the Commission stimulates Malta's government to formulate their national policy in such a way that it contributes to EU policy goals. For example, the TINA report had to show how the national policy contributes to the TEN-T network.

Other European actors who indirectly influenced the implementation process are the members of the European Parliament. In the Manikata and Ghadira cases, members of the opposition parties in Malta coerced the government by contacting members of the European Parliament. Members of the EU Parliament questioned the EU Commission about the course of TEN-T implementation. These parliamentary questions are a direct way of supervising the EU Commission. Subsequently, the EU Commission contacted the responsible authorities in Malta and asked for clarification and information. Even though the EU Commission depends on the goodwill of Malta's government to respond to such a request, it can raise the attention of the EU parliament and the EU Commission to the TEN-T policy implementation in Malta. Here, internal and national conflicts were transported to the EU level.

Stakeholders

Stakeholders of the implementation process are seen as the Local Council, environmental and heritage NGOs, opposition parties, economic investors, the media and the general public. The Local Council has legal responsibility for road maintenance and is entitled to make recommendations to the responsible authorities, but the TEN-T concerned arterial and distribution roads which are in the domain of the Malta Transport Authority (Gov, 1993). Further, the Environment and Planning Authority is obliged to contact the local councils in the matter of Environment Impact Assessments. Nevertheless, the local councils can only express their concerns like other stakeholders and therefore a local council does not have many other possibilities to influence the implementation process than the general public and NGOs. The local council informed the farmers and residents about the public consultation meeting and supported their opinion. However, in the Manikata and Ghadira cases, the non-governmental actors by-passed the local council and directly contacted the governmental actors. The environmental and heritage NGOs are a sort of watchdog. They have good contacts with the media and stimulate public discussion. The media provide functions such as communication panels for actors and stakeholders. Through internet blogs and letters, the general public can participate and follow the discussion between the actors and stakeholders. As with the above mentioned stakeholders, the opposition parties also try to influence policy implementation through the media. Economic investors such as hotel owners and construction companies lobby through the media for their interests. Additionally Members of Parliament from the Labour Party questioned and politicised the Manikata and Ghadira TEN-T policy implementation.

3.6.3 The core characteristics of the key actors

According to Contextual Interaction Theory, we assume that the actors' core characteristics, motivation, cognitions and capacity influence the interaction process. Further, that actors in the implementation process interact according to their characteristics. The next section analyses interviews and key policy documents to clarify and explain the actors' key characteristics and the influence of these on the interaction process. The guiding question having identified spatial misfits is: *to what extent do the spatial misfits originate from the common European policies or from Malta's national multi-actor interaction implementation process?*

According to our spatial misfit definition, a spatial misfit is not rigid. Congruence refers to the state of agreement and the achievement of coming together. That means that in a case of spatial misfits actors might be unable to reach an agreement or achieve harmony about the policy or the characteristics of a place during the implementation process.

The key actors personally explained in interviews what motivated them to implement, to support, to change or to oppose the TEN-T policy. Furthermore at the EU, national and local levels actors understand the policy differently and also learn from other actors during the implementation process. In the interviews, the actors expressed their opinions about TEN-T and described the implementation process. They also illustrated the governance structure and their capacities to influence the implementation process and how they are influenced by other actors. Additionally, policy documents also, show actors' goals, funding schemes, rules and obligations, as well as how actors interacted. By means of interview analysis, the sources of the actors' motivation, cognitions, capacity and power were identified. Further, as elaborated in the theoretical chapter, the review of influential theoretical policy implementation frameworks identified important values of the core characteristics. Tables 11 to 13 summarise the actors' characteristics. For the analysis of the interview scripts and the policy documents, we used the Nvivo text search method. Subsequently, we coded the data describing the sources of the core characteristics.

Motivation

The first core characteristic is motivation. As already noted, motivation is the driving force that initiates and directs actors. Motivation refers to an actor's own personal values and goals, as well as to a sort of extrinsic motivation, which originates in external pressures such as legal obligations and policy goals. In the Manikata and Ghadira cases, the identified core values of the motivation variable are: customs, former plans, goals, aims, objectives, costs and financial benefits, and statutory objectives and rules; plus external pressure coming from the EU Commission, ministers, the national and local electorates as well as lobby groups. Table 11 shows the sources of motivation for the actors in the Manikata and Ghadira cases. The subsequent text elaborates on the table.

At the EU level, the major source of motivation of the EU Commission is the general community goals, as agreed in the Treaty of Lisbon. Specifically, the Commission is motivated by the ultimate TEN-T objective which is to establish a multi-modal transport network and its seven guiding objectives. Primarily, the Commission wants to enhance the internal market and social and economic cohesion. Therefore, it strives for standardisation, accessibility, safety, reliability and quality in the transport network. Second, it aims to promote territorial cohesion through, for example, a reduction of economic and social disparities, an increase in economic competitiveness and the promotion of cooperation between regions. Third, another objective is sustainable development. The focus here is on limiting vehicle emissions and safety issues as well as on addressing social exclusion. Fourth, it wants to achieve a multi-modal and inter-operable transport system to support the single market. Fifth, it aims to reduce the impact of the transport sector on climate change. Sixth, coping with the effects of globalisation including the international dimension. Seventh, the Commission aims to develop a common transport policy (EC, 2004b).

Actors	Source of motivation
EU Commission	Common EU policy goals. Specific EU TEN-T goals. EU law, directives, agreements, guidelines. Specific TEN-T guidelines. Malta's National transport needs and priorities . External pressure (e.g. National governments and European Investment Bank).
EU Parliament	Common EU policy goals. EU law, directives, agreements, guidelines. Specific party objectives and goals. External pressure (e.g. electoral pressure).
Ministry for Infrastructure, Transport and Communication (former Ministry for Urban Development and Roads) Malta Transport Authority	Bad road condition in Malta, high maintenance costs, unsafe roads. External pressure (e.g. ministerial, electoral pressure, tourist industry). Ministerial responsibility. Power, prestige, success. EU funding and technical support. EU timeframe, EU law, guidelines, policy. International commitments. National law. Personal carrier.
Office of the Prime Minister Malta Environment and Planning Authority	National goals and priorities. External pressure (e.g. electoral and ministerial pressure). National law, policy. Power, prestige, success, image. EU funding, EU policy, EU law. International commitments. National law. Personal carrier. Power.
Farmers and residents (NGO Koperattiva Rurali Manikata)	Economic dependence on farming. Personal attachment to the locality and place. Protection of the locality and the nature. National law.
NGO Birdlife	Organization's statutes and goals. Commitments as Ghadira Reserve co- manager. EU, National and International law. EU life programme. Personal attachment to the locality and place.

Table 11. Source of motivation of the key actors Manikata and Ghadira case

The Commission formulated concrete tasks to identify and evaluate potential investment needs and priorities for the structural and cohesion funds. For this task, the Commission fully depends on the member states as the national governments formulate their needs and priorities. In Malta, the Ministry for Infrastructure, Transport and Communication, supported by the Transport Authority, identified and reported the strengths and weaknesses of Malta's transport system. Hence, the Commission is oriented towards Malta's transport needs and priorities. The TINA report and governmental actors state that Malta's TENT-T policy largely follows Malta's Master Plan of the Roads. Additionally, the specific TEN-T guidelines regulate the relationship of the Commission with the Monitoring Committee that monitors the implementation of the TEN-T policy in Malta. These rules allow the Commission to be actively involved in monitoring the implementation of Malta's TEN-T policy. Commissioners personally speak to members of Malta's Monitoring Committee, raising the EU priorities in general and the TEN-T objectives. The commissioners advise government officials on formulating projects in such a way that they are in line with the EU TEN- T policy and entitled for EU funding. Commissioners and governmental officials frequently, and on demand, communicate through letters, e-mails, telephone and personal meetings.

Another motivation of the Commission is rooted in external pressures from other member states, who finance the Commission's activities and the European Investment Bank. The Commission has to legitimise its activities to obtain funding. The monitoring activities therefore also serve this legitimation. In the Manikata and Ghadira cases, Malta's Transport Ministry and Transport Authority have to explain in detail why it has not fully carried out the identified national priority projects. The pressures on it make it difficult for the Commission to justify projects which create conflicts between the TEN-T and EU objectives. For example, in the Manikata case, the government justified the road through the improvement in accessibility of the area and as an integration measure. However, from the farmers' and the residents' point of view, the road construction would partly take away their economic and social basis of living, which would increase the social and economic disparities in Malta.

Further, external pressure also comes from the European Parliament which represents the European citizens. As with the Commission, the European Parliament is motivated by the common EU policy goals and law. However parliament members also have their own goals according to their political attitudes and party objectives. In the Manikata case, the EU parliamentarian who asked the EU commission to clarify the situation is a member of the European Green Party, which has a strong attitude towards environmental responsibility and environmental protection. Another Green Party goal is social justice. These goals conflict with the adverse effects of Malta's TEN-T policy on the Manikata area and its residents. The European Parliament not only exerts pressure, it is also pressed by the European electorate as their representative.

At the national level, the Ministry for Infrastructure, Transport and Communication, one of the key actors in the TEN-T policy implementation process, is mainly motivated by the poor conditions of the roads, with many roads in Malta considered unsafe. In the past, several technical approaches were used in the ad hoc maintenance of the roads. The Minister faces external pressure to improve the condition of Malta's roads, with industry needing a good infrastructure. Further, the general electorate conceives roads as an image of Malta and an indicator of a country's wealth and modernity. Malta's road users demand an improvement in the roads. Tourists complain about the unsafe roads. The tourist industry is very interested in the road construction in Manikata because of the Mistra Village Hotel Complex developments, and in Ghadira because of the beach enlargement. Traffic jams hamper the flow of goods and people. The poor road conditions are also identified as one reason for the declining use of public transport and increasing car ownership in Malta. The high traffic volume puts a strain on Malta's environment. Hence, the Prime Minister made improving the roads one of Malta's priority objectives. Ministers who fail to improve the road conditions are considered as powerless and unsuccessful. Due to Malta's size and its electoral system, a few hundred votes can decide elections, which creates powerful pressure.

On the one hand, the EU TEN-T policy creates an opportunity for the Maltese Transport Minister. The EU co-funding and technical support provide a good opportunity which can compensate for the lack of natural resources. This motivates the Ministry to maintain and build roads that are eligible for funding within the agreed funding period. The fixed funding period is therefore considered by the Ministry as an additional motivation to force the transport authority and the construction industry to carry out their tasks on time. Nevertheless, the EU co-funding is not the main reason for

implementing the TEN-T road policy: roads are a national priority and a need. As such, the Ministry was already searching for co-funding before EU accession. The Transport Authority, is conscious of the priority of the TEN-T projects: the officials know about the obligations, arising from EU co-funding, and the ministerial pressure on the authority is high to fulfill their tasks on time.

However, the EU co-funding does create a pressure to strictly follow the TEN-T guidelines, including reporting, monitoring and EIA procedures. Past experiences show that in other Maltese development cases where the EIA has indicated significant adverse impacts on the environment, developments have still been permitted. Malta in these cases acted in contradiction of the national environmental and planning legislation, and policy. However, in the Manikata and Ghadira cases, the Transport Ministry accepted the EIA results and acted according to national, EU and international laws and commitments by abandoning or shelving the projects. Hence, through the EU co-funding, the government is motivated to act in line with the national law and policy, the TEN-T guidelines, EU directives as well as international commitments.

Much of the ministerial pressure on the Transport Ministry and Authority comes from the Prime Minister. The maintenance of the roads and road construction are a national priority. The implementation of the EU co-funded projects is coordinated, assisted and monitored by the Planning and Priorities Coordination Department. The co-funding creates a strong motivation to implement the agreed projects. Apart from the national law, for the Prime Minister it is prestigious to comply with the EU agreements. The personal reputation of the Prime Minister in the EU also depends on the cooperation of the authorities and ministers. Additionally, the Prime Minister personally vouches for the implementation of the TEN-T policy as the general elections are very personalized in Malta. The electorate appreciates the improvement of the roads without this being a financial burden on the Maltese taxpayer. Accordingly, most of the TEN- T policy implementation took place without any opposition from the electorate. The Prime Minister is therefore highly motivated to preserve the positive image of the EU TENT-T policy.

The Malta Environment and Planning Authority became part of the Office of the Prime Minister after the 2008 national election in order to guarantee its functioning according to the planning law. In the past, the authority was considered by many Maltese as powerless and corrupt. Although the Authority faced high pressure because of the large development investments in Xemxija and in the beach enlargement at Ghadira, the Authority fully recognized both national and EU law.

At the local level, the non-governmental actors opposing the TEN-T policy were motivated in different ways. The farmers and the local residents in the Manikata case, were mainly motivated by a fear of losing their economic and social basis of life. Their target was to conserve the area as a farming and natural area. Improving the accessibility of the area was no motivation for them, as the road construction would mean giving up part of their identity. Further, the farmers and residents felt entitled to protest against the development of the TEN-T road as the national planning policy and law prohibits the development of important rural areas. Birdlife, the co-manager of the Ghadira Nature Reserve, was highly motivated by the national and international organization's goal to conserve birds, their habitats and global biodiversity. Motivation also came from the EU Bird Directives which encouraged the NGO to do everything in its powers to conserve and to improve the status of the area. Additionally, the NGO was

also motivated by the national law to protect the area. Hence, the NGO saw itself as a sort of guardian of the reserve and its birds. Many of the NGO members feel attached to the area or are scientifically interested in birds such that they feel a personal duty to protect the birds and the habitat.

Cognitions

The next core characteristic considered is cognition. Cognition indicates how actors understand and learn. It describes the actors' information filtering and processing, and their frame of reference. As such, information access, such as the jargon in reports and the availability of reports, is also crucial for cognition. The text search and interview analysis investigated the information and the focus of the actors. Subsequently, we elaborated on how the actors communicated, as well as the availability and accessibility of information. Finally we investigated how the key actors understood the information. An indicator is the actors' opinions, attitudes and judgements that they have of other actors and the policy. It is also important how actors filter the information, for example how they justify their own opinion and judgement, and how they experienced the TEN-T implementation process. Table 12 summarises the cognitions of the key actors. The table content is then elaborated in the following paragraphs. The Malta Transport Authority and the Ministry for Infrastructure, Transport and Communication are treated as a single actor in the table, as the authority did not participate independently in either of the two cases.

At the EU level, the EU commission conceives Malta's TEN-T policy as the "rehabilitation of the TEN-T network" (EC, 2011c). Hence, the EU Commission is focused on the maintenance of the roads, which is indeed one of the main objectives of Malta's TEN-T policy. The new construction of roads in Manikata and Ghadira are considered as minor components. Similar to the Maltese government, the EU Commission understands the TINA as an evaluation of the situation and not as a concrete policy. Therefore, the Manikata and Ghadira road projects are regarded as proposed projects only, and not as concrete policy. The Commission is aware of the local implementation conflicts but considers them as domestic affairs. The Commission also depends on information provided by the Maltese authorities. Given the experts in the Commission, the Commission is more focused on technical and financial information, rather than on environmental and social information. It mainly communicates with the Planning and Priorities Coordination Department at the Office of the Prime Minister.

The EU commissioners directly communicated with members of the Monitoring Committee which includes non-governmental representatives. However, the Commission is focused on the needs and goals of those actors which are represented in the committee. The Commission stresses official information and practices, and describes the communication with Malta's Transport Ministry and the Office of the Prime Minister as a good cooperation (EC, 2011c).

	Focused information	Communication with other actors			Case problem understanding
		Method	Actors	Quality	
EU Commission	EU goals. National policy measures. Governmental actors' reports (oral & written). Technical, financial statistics. Results cost-benefit analysis.	Official letters. E-mails. Telephone. Personal contact.	Ministry for Infrastructure and Communication. Planning and Priorities Coordination Department, Monitoring Committee.	+ +	Malta's TEN-T new road constructions is part of rehabilitation of Malta's roads network. TINA is no concrete policy but an evaluation of the transport situation in Malta. Lack of data due to limited resources and time. Lack of data no cause for stopping co-finance. Malta's TEN-T road construction costs relatively low compared to other EU projects. TEN-T opposition is a home affair.
EU Parliament	Manikata: TEN-T opposition reports. Negative environmental and social impact of the EU TEN-T policy.	E-mails. Telephone. Personal contact. Parliamentary question.	Party members. EU Commission.	+ +	Manikata is an incorrect implementation of EU TEN-T policy. TEN-T Opposition is EU affairs.
Ministry for Infrastructure, Transport and Communication (former Ministry for Urban Development and Roads) Malta Transport Authority	Transport Infrastructure needs assessment. Master Plan for the Roads of Malta and Gozo. Road safety and accessibility and quality. Economic and tourism industry road needs.	Official letters. E-mails. Telephone. Personal contact. Media.	EU Commission. Ministries, authorities. Local Council. Farmers. Birdlife. Stakeholders.	+ + + / / /	Manikata and Ghadira typical land use conflicts. TINA is no concrete policy but an evaluation of the transport situation in Malta. Policy implementation is the road construction. TEN-T policy is mainly the widening and maintenance of roads which are no problem. EIA obliged by EU and National law. Farmers and Birdlife stakeholders, not actors. Protest of the farmers and NGO's disproportionality strong.
Office of the Prime Minister	Transport Infrastructure needs assessment. Master Plan for the Roads of Malta and Gozo. Road safety and accessibility and quality. Economic and tourism industry road needs. Image of the Prime Minister.	Official letters. E-mails. Telephone. Personal contact. Media.	European Commission . Ministry for Infrastructure and Communication. Monitoring Committee. Stakeholders.	+ + + +	TEN-T policy has a high National importance. TINA is no concrete policy but an evaluation of the transport situation in Malta. Ministers are responsible for the implementation. Policy implementation is the road construction. Manikata and Ghadira typical land use conflicts. Avoid public conflicts, follow the EU and National guidelines and law.

Malta Environment and Planning Authority	Environmental and planning aspects of the TEN-T policy. Available statistics data.	Official letters. E-mails. Telephone. Personal contact. Media.	Ministry for Infrastructure and Communication. Monitoring Committee. Stakeholders.	+ +	Transport Ministry and Authority is responsible for policy implementation. Environment and Planning Authority is entitled to participate. Informs governmental actors already in the planning stage about environmental issues and legislation. Environmental aspects are recognized and secured trough the EIA.
Farmers and residents (NGO Koperattiva Rurali Manikata)	Available information, from newspapers and Transport Ministry, National and EU law. The own local knowledge about area. Negative personal social, and economic impacts of the road construction.	Protest letters. E-mails. Personal contact. Media.	Ministry for Infrastructure and Communication. Local Council.	- +	Assessments part of the policy implementation, which would have been implemented. Governmental actors partly as poorly informed about the spatial conditions. Regard themselves entitled to participate in the implementation process. Fields are not legally but by consuetudinary law owned by the farmers. No access to vital documents, information only on request. No information about decisions.
NGO Birdlife	Environmental information. Negative effects of road removal and construction. Own local knowledge about area. InterNational knowledge. Available information, from newspapers and Transport Ministry, National and EU law.	Protest letters. E-mails. Personal contact. Media.	Ministry for Infrastructure and Communication.	-	Assessments part of the policy implementation, which would have been implemented. As co-manager of the nature reserve actor of the implementation process. No access to vital documents, information only on request. No information about decisions. Road construction, breach of National and EU law.

+ Good communication, / Sufficient communication, 0 No information, - Bad communication according to the actor

Table 12. Cognitions of the key actors Manikata and Ghadira case

In comparison, the European Parliament uses the contacts and information provided by affiliated party members and associates in Malta. Party members frequently visit and meet each other. The parliament members can ask the Commission for clarification of a situation, as in the Manikata case. However, in the Manikata case, the Commission acted cautiously. It formally requested the Maltese authorities to clear up the situation but these calls remained unanswered. The Parliament therefore also depends on the goodwill of the Maltese authorities. Moreover, it depends on the Commission as to how it understands the Maltese authorities and if it reacts to the non-communication. In the Manikata case, the Commission did not regard this lack of information as well as missing statistical data as an obstruction that would lead it to describe the cooperation with the authorities as unsatisfactory. This indicates that the Commission regards the Manikata and Ghadira policy implementation conflict as purely a local incident, and the responsibility of the national and local authorities.

The Malta Ministry for Infrastructure, Transport and Communication is mainly focused on Malta's Master Plan of the roads. The plan contains detailed planning to increase the safety and the quality of Malta's road network. Hence, the TINA is in line with the planning. Additionally, the new projects, such as the Manikata by-pass and the Ghadira Bay upgrading, are very beneficial from economic aspects. As the former Minister for Investment, Industry and Information Technology, the Transport Minister is conscious of Malta's need for economic development and touristic investments. The Minister still has good contacts with the private entrepreneurs and stresses the importance of a good infrastructure for the economic development of Malta.

Communication with other Ministries and Authorities is conceived as good. The Transport Authority assists the Ministry with the needed technical information. The Ministry and the Authority understand TINA as an evaluation, and as part of the planning process, not as a concrete policy. Therefore they do not regard it as necessary to inform the general public. The Ministry knows that large development projects in Malta trigger land-use conflicts due to the small size and high population density, as well as Malta's historical and environmental heritage. Given the traditional hierarchical and centralised way of policy implementation, the government keeps the general public out of the planning process as long as possible. Nevertheless, the Ministry in this instance was confronted with an EU policy, that requires public participation in the policymaking process. This forces the Ministry to involve public interests. The Ministry therefore maintains frequent contact with public–private cooperations like Malta Enterprise, the National Commission for Sustainable Development and the Malta Council for Economic and Social Development. These organizations are recognized as stakeholders and are part of the Monitoring Committee. Other NGOs, which are more critical of the government's policy, are excluded from such talks. The Ministry contacted un-represented actors such as Birdlife for bilateral talks about the Ghadira project planning. However, the communication stalled when Birdlife signaled its disagreement with governmental plans. The main reason for communicating with stakeholders who are not on the monitoring committee is because of the EIA procedure. At the EIA consultation meeting, the Ministry and the Authority mainly inform stakeholders and note their concerns. The meeting is considered, by the Ministry and the Authority, rather as an EU and national obligation, and one which often hampers the planning, than as a useful information exchange tool. The Manikata farmers and residents had to ask for vital information. Key documents were not published on the

website, or only temporarily published. Thus, these actors had difficulties in properly informing themselves about the TEN-T policy.

Similar to the Transport Ministry and Authority, the Prime Minister is focused on the TEN-T policy as a national priority. The Prime Minister's focus is also on safety, quality, the economic cost and economic benefits of the TEN-T, based on the available technical data and a personal evaluation of the situation. Additionally, the Prime Minister, or at least the Office of the Prime Minister, is oriented towards the EU TEN-T policy. The Planning and Priorities Coordination Department, part of the Office of the Prime Minister, evaluated the Maltese projects to see whether they were eligible for EU funding. Further, it is involved in the monitoring process. The department informs the governmental actors about possible implementation difficulties with regard to the EU TEN-T guidelines; for example, if Maltese policy is not consistent with EU law. The communication with other Ministries and the EU Commission are considered as good. Frequently meetings, e-mails and personal conversations guarantee information exchange. Furthermore, the Prime Minister frequently holds meetings with the Malta Council for Economic and Social Development to remain informed about the economic and social needs.

The Office of the Prime Minister published many related documents on its website. However, not all the relevant documents were published from the beginning. The TINA and the subsequent feasibility studies were not published on completion. The documents were regarded as scoping documents which should not be made public at that stage. The Prime Minister is conscious that information in general can trigger public and political opposition. Holding back information is used by the government as a strategic tool in exercising power. The Prime Minister tries to avoid national conflicts. Conflicts are understood as a drawback for the TEN-T policy. In the Manikata case the Prime Minister functioned as an arbitrator who calmed down the farmers' and residents' unrest. The conflict was solved by stopping the Manikata by-pass plans and shelving the Ghadira project.

In comparison to the other governmental actors, the Environment and Planning Authority has a different focus as it is stresses the environmental and planning aspects of Malta's TEN-T policy. In both the Manikata and Ghadira cases, the authority informed other actors about the negative environmental impact of the projects. In the Ghadira case, the Environmental Impact Statement 2010 reinforced the judgments of the authority on the adverse environmental impacts made at the beginning of the implementation process. Hence, the adverse environmental impacts of the project were known by the Transport Ministry from the start. Nevertheless, planning continued. With regard to communication, as part of the Office of the Prime Minister, the Authority's employees state that they communicate well with other governmental actors. However, before the Authority became part of the Office of the Prime Minister, the Authority determined policy directions through the Structure Plan, Local Plans and Structure Plan reviews, such that responsibilities overlapped with other authorities. This was one of the reasons for the Prime Minister to reform the Authority. The Authority was also considered by many Maltese as lacking transparency, and unaccountable. In the Manikata and Ghadira cases, this image of the Authority was partly confirmed as it did not publish important documents such as the EIA at the beginning of the process.

The farmers and residents in the Manikata case, and Birdlife in the Ghadira case, were largely excluded from the meetings with governmental actors. Additionally, access

to information was hampered, as information was not published or only temporarily accessible. Governmental actors provided information, but only on demand. Especially at the beginning of the TEN-T policy implementation process almost no detailed information was available to the non-governmental actors. Here, communication and information exchange took place mainly through the media and at the public consultation meetings. Accordingly, the non-governmental actors focused on the little information available at the beginning of the process and on their own local knowledge. Based on this information, they reasoned the possible social and environmental impacts of the TEN-T projects. Later in the process, plans were made accessible. Contrary to the governmental actors, the non-governmental actors understood the TINA report and subsequent reports as part of policy implementation. The non-governmental actors expected, based on their experiences of former policy implementation processes, that, unless there were protests, the government would build the Manikata bypass and upgrade the Ghadira Bay road. Therefore, the actors conceived it as legitimate to enforce their recognition as actors through noisy opposition in the media.

Capacity and power

The third core characteristic is capacity and power. As explained earlier, power refers to the capacity of the actors in the implementation process to implement the policy, and also includes their capability to hamper or to change the process. In general, capacity is understood as the ability to advance specific or one's own purposes. Two important sources of power are the attribution of power, to an actor by other actors, and the availability of resources. Through the analysis of the key actor interviews and key documents as well as the literature review of leading policy implementation frameworks, we identified several values related to capacity and power. Values related to the attribution of power are: obligations, legitimacy, inclusiveness, the EU and national law, trust, respect and fear, as well as the governance structure. Values of the resources are: land, people, knowledge, money and time. Through the values, we were able to identify which actor exercised power and which actors attributed power to the power-exercising actors. Further, we identified the main resources that supported the exercise of power (Table 13). The following paragraphs elaborate the table.

The TEN-T policy was established at the EU government level, and works in a top-down fashion. The EU planning methodology states that: "Each network is designed separately, primarily working top-down: from high to low scale level, with a bottom-up feedback mechanism. This is the only way to achieve cohesion between networks at various levels. If a local or regional network is used as the starting point, it becomes very difficult to achieve a coherent National network. (…) First the higher scale, then the lower scale Networks for every scale are designed independently. For the Ten-T projects this means only projects relevant for the EU-scale need to be selected and fit within the network" (Griet De Ceuster et al., 2010). This planning methodology to an extent reflects the governance structure and the power relationships in the Manikata and

Actors	Capacity and Power		
	Exercised power	Attributed power	Resources
EU Commission	Development and decision on EU TEN-T Policy. Development and decision on Environment LIFE Programme. Decision on National support scheme.	Transport Ministry carries out TEN-T Policy. Ministry reports on the implementation process. Office of the Prime Minister publishes key documents. Transport Ministry makes Environment Impact Assessments. Planning and Environment Authority publishes and to makes Environmental Impact Assessments accessible. Malta's governmental actors follow the rule. Birdlife carries out the LIFE programme.	EU policy. EU law. Legitimacy. Time framework. Funding. Technical knowledge. Close contact with the Office of the Prime Minister.
EU Parliament	Parliamentary questions	EU commission contacts the Transport Ministry	EU law. National and Local knowledge. Close contact to party members.
Ministry for Infrastructure, Transport and Communication (Ministry for Urban Development and Roads)	Decides on Malta's TEN-T projects and priorities. Guides and supervises the Transport Authority Employment and dismissal of staff.	Transport Authority carries out the TEN-T policy	National Law. Transport policies. Legitimacy. Jobs. Technical knowledge. Close contact to the Prime Minister and other Ministers.
Malta Transport Authority	Carries out ministerial decisions. Employment and dismissal of staff. Advises the Transport Ministry in policy.	Transport Ministry follows the advises.	Legitimacy. Technical knowledge. Jobs.
Office of the Prime Minister	Prioritize National TEN-T policy. Prime Minister has the final word, to stop and to shelve the projects. Appoints and dismiss Ministers. Rearrange authorities.	Ministries follow National policy direction and carries out National policy. Transport Ministry stopped Manikata Project and shelved Ghadira project.	National Law. Highest hierarchical position in the governance structure. Legitimacy. Finances. Close contact with the Ministries, Authorities and EU Commission.
Malta Environment and Planning Authority	Provides development permissions. Advises the Transport Ministry on planning and environmental aspects.	Transport Ministry accept development decision.	Environment Impact Assessment. Planning and Development Act. Planning and environmental knowledge. Jobs. Close contact with the Ministries, Authorities.
Farmers and residents (NGO Koperattiva Rurali Manikata	Mobilization of the Malta's environmental and historical NGOs. Mobilization of the Malta's opposition parties.	Negotiations with the Transport Authority. The Prime Minister and Transport Ministry stopped Manikata project. Support of EU parliament. Support of opposition parties. Support of environmental and historical NGOs. Broad Public support.	Local knowledge. The media. Legitimacy.
NGO Birdlife	Implementation of EU LIFE policy. Investigation and reporting of environmental damages. Mobilization of the Malta's environmental and historical NGOs. Mobilization of the Malta's opposition parties.	Negotiations with the Transport Authority. Support of opposition parties. Broad Public support. Malta Environment and Planning Authority supports Birdlife position against proposed new road construction. Transport Ministry shelved Ghadira project.	EU Law. National law. Close contact with the EU and International Birdlife Legitimacy. Local expert knowledge. Finances.

Table 13. Capacity and Power of key actors Manikata and Ghadira case

Ghadira cases. The European Commission would finally decide if the Maltese TEN-T policy could be part of the EU TEN-T policy and eligible for EU funding. Nevertheless, this was not a unilateral decision. The Maltese governmental actors negotiated to become part of the network. Before accession, it was difficult for the Maltese Transport Minister to justify Malta's TEN-T participation. However, following accession, stimulation of Malta's economy, mainly the tourism industry, and cohesion became important to the EU. Malta's TEN-T policy is a convergence of European demands and national priorities. The most important resources of the EU Commission are funding, knowledge and legitimacy. As noted earlier, the EU funding is a strong source of motivation. The implementation of Malta's TEN-T policy would have been difficult without this funding. In the Ghadira case, the co-funding resulted in a sort of power balancing as the EU Commission also financially supports Birdlife through its LIFE programme. This forces the national government to respect the LIFE-funded projects.

In addition to the co-funding, knowledge is also an important source of power. The exchange of knowledge and the introduction of EU standards is part of EU policy. Before accession, many Maltese considered any request for technical support and knowledge as a sign of weakness of the government in the sense that Malta could not be fully independent and still needed support from other countries. So EU accession legitimises the acceptance of money and know-how. On the one hand with EU accession, Malta became obliged to adopt EU standards with several EU and national documents stressing Malta's obligations towards the EU (EC, 2004a; TINA, 2002). On the other hand after accession, Malta became entitled to receive support and also to support other EU member states.

Another essential source of the EU Commission's power is the timeframe. The Commission determined a timeframe for the implementation of the TEN-T policy which limits the accessibility of co-funding. The timeframe creates a form of pressure and can even legitimise decisions that are not fully based on quantitative data. The TEN-T policy should be fully based on technical and socioeconomic data but the relevant data was Malta is not available or out of date. Hence other criteria such as personal assessments by the Transport Minister became decisive in Malta's TEN-T policy. Accordingly, the TINA report states that it also uses "political parameters" to define Malta's TEN-T needs (TINA, 2002). This means that the assessment of needs is not objective but includes the interests of beneficiaries.

With regard to the EU Parliament, it functioned in the Manikata and Ghadira cases as a sort of pressuriser on the governmental actors. Through a parliamentary question, the EU parliament demonstrated to the governmental actors that local interests were being represented at the European level. Moreover, the parliamentary question required not only a clarification of the situation from the national government and the EU Commission, it highlighted an instance of maladministration. For the prestigious TEN-T project, which was mainly being implemented on time and without serious incidents, the question was unpleasant for the Maltese Transport Minister and Prime Minister. The EU Parliament effectively questioned the legitimacy of the TEN-T policy implementation in Malta. The personal local and national contacts provided the EU Parliament with local insider knowledge which was transported to the EU level. Hence, in the Manikata case, the local opposition became a European issue. This blurred the boundaries of Malta's home affairs.

In Malta, the Transport Minister largely uses his ministerial power and position in Malta's highly hierarchical and centralised governance structure. The Ministry creates alliances with those non-governmental actors that support the policy of the Ministry. These actors are allowed to be involved from the beginning of the planning stage. Actors which oppose the Ministry policy have difficulties in gaining information. Additionally, the governance structure creates a form of fear. In the Manikata case, the simple appearance of the Minister was enough to intimidate the farmers. Only as a group were the farmers and residents able to oppose the TEN-T policy. Farmland belongs to government, so farmers feared that the Minister could use his power to withdraw the land. Also the ministerial respondents interviewed wanted to remain anonymous because they did not want to face problems. The Minister has the ability to dismiss employees, which forces employees in such a hierarchical structure to be submissive to the leader. Accordingly, the Transport Authority does not decide but instead carries out Ministerial decisions. The Authority does not have the power to negotiate important questions. In the Manikata and Ghadira cases, the Minister was present in public meetings and at press conferences to strengthen the position of the Ministry. However, the Authority does negotiate over minor issues and is the first contact for the non-governmental actors that are not represented on the Monitoring Committee, that monitors the implementation of the TEN-T policy in Malta. The Authority's source of power is mainly its technical and local knowledge. The Ministry needs the Authority's experts for the development and implementation of its policy. Nevertheless, the hierarchical governance structure, and atmosphere of fear and pressure makes it difficult for the actors to negotiate openly.

The Transport Minister is aware of the investment interests and plans of entrepreneurs and building constructors. For example, in the Ghadira case, the economic interests of the Minister and the tourist industry, which would benefit from an enlargement and environmental improvements of the beach, are strong. A good example, is a hotel owner who explained publically that the plans of the Transport Minister met his proposals for a beach enlargement (Debono, 2008). Due to the EU involvement and the active observations of the process by the Commission, the Ministry was forced to follow the national and EU law. The pressure from the tourist lobby, on the one hand, and the EU obligations, on the other, created a dilemma for the Transport Minister. To abandon the policy after promising it to beneficiaries and having the finances for the project would mean a loss of funds and prestige. Violating the EU rules would have had the same result. As such, the Minister was not interested in acting against the EU policy and guidelines. Instead, the Ministry offered several options, and awaited the decision of the Malta Environment and Planning Authority. In this way, the Minister could show that he had recognized and supported the demands of the tourist industry but that he could not decide and enforce the project because of a decision made by the Planning and Environment Authority.

An advantage in the negotiations on TEN-T with the EU Commission, was Malta's size and geographical position. Due to its small size, the EU investment in Malta's TEN-T is relatively low compared to other TEN-T projects. Malta's geographical position as a peripheral island state makes the integration of Malta's transport network one of the EU's priorities. Time also proved to be decisive. Due to the lack of time, many of the expected data could not be provided to the European Commission, and therefore Ministerial opinion was important in Malta's TEN-T policy.

The Prime Minster has the final word in the TEN-T policy as the policy is seen as a national priority. In the Ghadira project, representatives of the Office of the Prime Minister were present at the development stage to support and guide the policy, and directly reported to the Prime Minister. As mentioned earlier, the Prime Minister can initiate and also stop a policy. The TEN-T policy was very prestigious for the Prime Minister and therefore he guided and led the process. In the Manikata case, he stopped the project before it became damaging to his image on the national and European levels, and presented himself as an arbitrator between the farmers and residents, and the Transport Minister. On the national level, he is anxious to convey Malta's EU membership as an advantage and to embody leadership as a European. As such, the Prime Minister avoids conflicts with the European Commission and strives for good cooperation. The multilevel governance structure forces the Prime Minister to negotiate with the non-governmental groups and to follow the EU and national laws.

Malta's governance structure allows the Prime Minister to reshuffle his cabinet and dismiss ministers. Accordingly, the pressure to support the Prime Ministers policy is high. Further, the Prime Minister is linked to and decisive for civil society through the Malta Council for Economic and Social Development which is represented on the Monitoring Committee. The Prime Minister appoints the council after consultation with the former council members (Gov, 2001b). Due to Malta's centralised governance structure it is common for the Prime Minister to appoint individuals, who support the government's policy direction.

With regard to the Environment and Planning Authority, the Prime Minister strengthened this control on the authority by making it part of the Office of the Prime Minister. This means that the Authority's capacity to act and its efficiency is linked to the Prime Minister's leadership, and this creates strong ministerial pressure. It also makes the Authority very powerful. The TINA experts recognized in the report that: "The existence of an agency with this political power (out of the traditional Ministries of Transport) is not common in Europe; however, the cooperation with it gave us an overall excellent impression" (TINA, 2002). This demonstrates that the Prime Minister is interested in ensuring that the Environment and Planning Authority functions according to its purpose. Any malfunction of the authority, as in earlier situations, would have damaged the Prime Minister's reputation. So, indirectly in the Ghadira case, the Transport Minister passed the decision to shelve the project over to the Prime Minister.

Unlike the TINA experts, the farmers and residents involved in the Manikata case, and Birdlife in the Ghadira case, did not consider the Environment and Planning Authority to be excellent. Trust in the Authority is very low due to former development plans which were permitted despite having clearly negative impacts on the environment. The low trust in the EIA control mechanism, and the lack of clear information, resulted in a noisy opposition. The farmer and residents in Manikata mainly used their local knowledge to inform the public through the media about the possible effects of the road construction. They succeeded in mobilizing the Malta's opposition parties, which then contacted the European Parliament. The good local knowledge as well as their well-formulated press releases and statements forced the government to respect the farmers and residents. Further, the self-organization limited the fear of many farmers and residents in opposing the government's policy. It also helped in communicating with

governmental actors and crossing language barriers. Additionally, many people consider farmers to be a symbol of Malta, and this creates a legitimacy for their opposition.

In the Ghadira case, Birdlife also managed to mobilize the public and other Maltese environmental and heritage NGOs through the media. Their EU funding, the funding and the support from the large international Birdlife organization also helped to make Birdlife Malta a respectable and powerful organization. Although the organization is co-manager of the Ghadira reserve and therefore has to cooperate with the government, this did not stop it opposing the Ghadira bay upgrading. The organization has very good local and scientific knowledge about the reserve and therefore it can estimate the effects of the road construction on the area. Furthermore, people trust the information from Birdlife, further legitimising their opposition.

Summary

The EU co-funding is a resource that significantly contributes to the implementation of the projects (through capacity and power). However it is not the only one. Also decisive in the Manikata and Ghadira cases is "legitimacy". The EU level is not powerful enough to provide sufficient legitimacy for the projects. This is especially true in the case of Ghadira where two EU projects are in conflict. On the national level, governmental actors are mainly motivated through the national goals, poor road conditions and touristic investment to implement the Manikata and Ghadira projects. The Planning and Environment Authority informed the governmental actors about the conflicting EU projects at the start of the implementation (cognitions), but the old hierarchical governmental way of doing business was to just enforce the implementation and not inform stakeholders. The introduction of the EIA procedure requires a public consultation, and so that government could not act in the old "command and control" way. Furthermore, the direct involvement of the EU Commission in the monitoring process (power and capacities) forced the Transport Ministry to negotiate with the farmers and residents in the Manikata case, and Birdlife in the Ghadira case.

The official interaction of governmental actors are characterized by good communications and understanding (cognitions). Only a few governmental actors admitted that negotiations were difficult due to a lack of understanding and overlapping competences. In comparison, non-governmental actors such as the farmers and residents and also Birdlife describe communication with governmental actors as poor. Governmental actors neglected non-governmental actors (power and capacities), and the non-governmental actors opposed the projects publically through the media and during the consultation meetings. So far, the actors have not been able to find a way to harmonize the policy.

3.7 Origins of the spatial misfits

Section 3.7 builds on the question: *to what extent do the spatial misfits originate from the common European policies or from Malta's national multi-actor interaction implementation process?* A sub-question is whether the spatial misfits originate at the EU policy level, the national or the local policy level. The analysis of the TEN-T policy implementation process using the Contextual Interaction Theory shows that not one but several factors cause the spatial misfit. The origin of a misfit cannot therefore be clearly

ascribed to the European level, the national level or to the local level. However, the European level significantly influenced the core characteristics of the key actors and the context. Table 14 shows the actors, the governance levels, and the factors that influenced the spatial misfits in the Maikata and Ghadira cases.

Level	Actor	Factor	Actors characteristics
EU	EU Commission	TEN-T policy: neglecting spatial characteristics. Funding EU law Time frame Legitimacy	Cognitions. Motivation. Capacity and Power.
National	Ministry for Infrastructure, Transport and Communication (Ministry for Urban Development and Roads) Malta Transport Authority	TINA, neglecting spatial characteristics of the place. Negotiation only with allies. Neglect and exclusion of farmers and Birdlife. Neglect information of Planning and Environment Authority. Depriving of information. Prioritization of touristic investment	Cognitions. Cognitions. Capacity and Power. Motivation.
	Office of the Prime Minister	TINA, neglecting spatial characteristics of the place. Manikata and Ghadira governmental land. Prioritization of touristic investment. Ministerial pressure .	Cognitions. Motivation. Capacity and Power.
	Malta Environment and Planning Authority	Depriving of information.	Capacity and Power.
Local	Farmers and residents (NGO Koperattiva Rurali Manikat	Public opposition in the media.	Capacity and Power.
	Birdlife	Public opposition in the media.	Capacity and Power.

Table 14. Spatial misfit origins Manikata and Ghadira case

Table 14 shows that the EU timeframe, the co-funding as well as EU law was a strong motivation to implement the TEN-T policy in Malta in a short time. Further, the cognitions of governmental actors were influenced through the EU TEN-T policy. The government's understanding of Malta's road policy changed, from normal national road maintenance to the prestigious TEN-T projects with a high national importance. Governmental actors realized that they would have to follow EU guidelines and laws during the implementation in order to receive the co-funding and to show their support of the EU TENT-T policy (capacity and power). The neglect of the characteristics of the place in the EU TEN-T policy can be found back in Malta's TEN-T policy. The EU Commission agreed to co-fund Malta's Manikata and Ghadira projects without checking if the projects were harmonized with the nature and with other EU projects. As such, the EU Commission legitimized Malta's Manikata and Ghadira projects. This pushed and supported Malta's TEN-T policy. From this perspective, the spatial misfit originated at the EU level.

However, the EU Commission did not force Malta to develop the Manikata and Ghadira project. The table shows that, at the national level, Malta's Transport Minister

followed the policy of the Prime Minister and prioritized touristic developments (motivation). Further, the TINA neglected the characteristics of the place, resulting in a functional road policy (cognitions). The Transport Ministry was conscious about the impact on the place since the Planning and Environment Authority had informed the Ministry about the characteristics of the place. Nevertheless, the Transport Authority ignored the information. The priority given to the project and the demands of the tourist industry (cognition) strengthened the motivation of the Transport Authority to implement the policy. This focus of the Transport Authority created a policy with spatial misfits. Furthermore, the Transport Authority and other governmental actors did not manage to harmonize the policy. The governmental actors excluded the farmers and residents from the implementation process as far as possible and deprived them of information (capacity and power). This made it impossible to change the values of the local actors or to share local knowledge or to adjust the policy or some characteristics of the place. Therefore, it can be concluded that the spatial misfits also originate at the national level.

Initially, the local level was, in the implementation process, excluded by governmental actors. The local actors gained power when they started to involve the media and other environmental and cultural NGOs. However this exercising of power not only created a chance to negotiate, it also blocked an exchange of knowledge and a way to develop mutual understanding. Nevertheless, it can be concluded that the spatial misfit mainly originated on the European and national levels.

3.8 Summary and conclusions

The chapter has analysed spatial misfits in the Manikata and Ghadira TEN-T road projects. We have emphasized the characteristics of the place to be consistent with the place concept and investigated the first question: *to what extent does the Manikata and Ghadira TEN-T road policy spatially misfit with the place of the implementation?* Subsequently by using the Contextual Interaction Theory, we have analysed the policy implementation process and have investigated the second research question: t*o what extent do the spatial misfits originate in the common European trans-European Transport network policy or from Malta's national multi actor interaction implementation process*?

Much policy implementation research investigates if and how policies have been implemented. The focus of analysis is mainly the governance structure, the policy instruments and actors' behaviour. The place where the policy needs to be implemented often plays only a minor role. In the Manikata and Ghadira cases, the TEN-T road policy has not been fully implemented yet. In the Manikata case, the process has completely stopped. In terms of outcome-oriented policy implementation research, the policy implementation has failed. However, by investigating the place, the picture becomes more differentiated.

The analysis of the place in the Manikata and Ghadira cases has shown that Malta's TENT-T road policy in the Manikata and Ghadira area does partly misfit with the characteristics of the place of implementation. The construction of the new road in the Manikata plans would have been functional and effective in managing the expected increase in traffic. Nevertheless, at the same time, the road- and the traffic-related air,

light and noise pollution would significantly have disturbed the main functions and nature of the Manikata area. In the Ghadira situation, removing the road at the beach would fit with the area, but the new road construction would not. As with to the Manikata case, the new road would have adverse effects on the nature and on the function of the area as a nature reserve. The institutional boundaries of the Manikata and Ghadira areas are managed by the Malta Environment and Planning Authority. The roads are managed by the Transport Authority and thus road use could not be managed according to the environmental and residential needs. The values of the area are manifold including strong naturalistic and humanistic values, whereas roads mainly have only utilitarian values for the users. Both areas already have roads and the additional utility of the new roads is small. The spatial misfit, as part of the specific context, influences the actors' characteristics and vice versa. For example, in the Manikata case, the farmers and local residents opposed the government TEN-T road policy. In the Ghadira case, the Planning and Environment Authority did not permit the new road construction due to its adverse environmental effects.

With regard to the origin of the spatial misfits, according to much of the Europeanization and Social-ecological Resilience literature that uses a misfit concept, a misfit originates in a poorly designed or incoherent higher level policy, and also in the hierarchical governance structure. An analysis of the EU TEN-T policy, which is part of the structural context, and Malta's TEN-T policy (specific context) shows that the policy ignores the characteristics of the place. In effect the EU and national policies are designed to achieve specific transport goals but ignore the place where the policy is to be implemented. In the Manikata and Ghadira cases, neglecting the characteristics of the place is one factor in the spatial misfit.

Another element is the governance structure. In the Manikata and Ghadira cases, the hierarchical and central governance structure in Malta was important in that governmental actors felt able to exclude the farmers and residents as well as Birdlife from the implementation process for as long as possible (capacity and power). Further, local knowledge and environmental information provided by the Planning and Environment Authority was excluded at the beginning of the process. This limited the cognition of the Transport Ministry and Authority. The exclusion of actors, as well as of local and environmental knowledge, during the process can be considered as another factor in the spatial misfit since this limits the ability to harmonize the policy.

With regard to the EU involvement and the multi-level governance structure, the involvement of the EU Commission opened Malta's central governance structure to such an extent that stakeholders of the process were informed by governmental actors through the EIA procedure which includes a public consultation process. Furthermore, the EU legitimized the involvement of the farmers, the residents and Birdlife in the process. The EU Commission also financially supported actors such as Birdlife in another EU project which conflicted with Malta's TEN-T policy in the Ghadira region. This made Birdlife a powerful actor. Nevertheless, due to Malta's hierarchical governance structure, non-governmental actors had to force their participation in the negotiations through involving the media (capacity and power). The communication through the media can thus be identified as another factor which stimulated a spatial misfit. It seems the EU involvement was not strong enough to change Malta's governance structure but was strong enough to open up the process to excluded actors.

Another aspect is that EU Commission legitimized and supported Malta's TEN-T policy through co-financing. This motivated the Transport Ministry and the Office of the Prime Minister to prioritize the TEN-T policy in Malta. Further, the focus on the EU TEN-T policy guided Malta's policy aims. The EU timeframe also encouraged the governmental actors to push the implementation. Nevertheless, Malta's government was not forced by the EU Commission to develop the Manikata and Ghadira TEN-T policy. Malta's TEN-T policy mainly stresses the importance of touristic investments, and thus differs from the EU TEN-T policy. The influence of the EU policy cannot be isolated from the other factors and identified as the origin of the spatial misfit. We therefore conclude that the spatial misfit in the Manikata and Ghadira cases originates in the policy implementation context, the different cognitions and the imbalance of power and capacities at all policy levels

Chapter 4

Renewable Energy Policy in Malta[2]

4.1 Introduction

Malta's renewable energy policy is embedded in Malta's energy policy framework which consists of six policy areas: energy efficiency, reducing reliance on imported fuels, stability in energy supply, reducing the emissions from the energy sector, delivering energy efficiently and effectively, and ensuring that the energy sector can deliver (MRRA, 2009b). The renewable energy policy, as drafted by the Malta Resources Authority in 2006, follows the general energy policy objectives. The three key targets of the renewable energy policy are first promoting renewable energy sources, second improving the quality of life and third ensuring that support services and development facilities are available and accessible. The three overriding objectives include policy goals such as the continuation of a RES strategy, the establishment of support mechanisms for renewable energy sources, the promotion of small-scale renewable energy technology systems, the promotion of wind farms, the promotion of solar thermal applications, and the recovery of energy from waste. Further, the government has committed itself to ensuring that citizens are not compromised or negatively affected by the renewable energy sources policy and to providing access to information, promoting public participation and acceptance of renewable energy sources (MRRA, 2006).

Malta's renewable energy policy must be considered in the context of the European renewable energy policy which aims to achieve competitiveness, security of energy supply and environmental protection. The European Commission has created a legal framework for the national renewable energy policy (Table 15) (EC, 1997, 2010a). Apart from the directives which are directly related to renewable energy, the European Commission and Parliament have enacted several directives and regulations which stimulate energy saving and the use of renewable energy (see Appendix).

Malta's energy policy has been characterized by the European integration process since it applied for EU membership in July 1990. Malta has implemented several EU directives which regulate the transparency, competition and energy supply of the European energy market. The government reformed Enemalta, the state-owned monopolic energy company which was responsible for both regulation and energy supply until 2000. In the same year, the government also enacted the Malta Resources

[2] The preliminary version of this chapter was published as: Kotzebue, J. R., Bressers, H. T. A., & Yousif, C. (2010). Spatial misfits in a multi-level renewable energy policy implementation process on the Small Island State of Malta. *Energy Policy*, 38(10), 5967-5976.

Policy tool	Policy objective	Year
Green Paper on renewable sources of energy	To open up a debate on the most urgent and most important measures relating to renewable sources of energy, identifying the objectives, the obstacles and the means to be deployed.	1996
White Paper- Energy for the future: renewable sources of energy	Community Strategy. Long term objective to generate 12% of energy from renewable sources by 2010	1997
Directive 2001/77/EC Electricity produced from renewable energy sources	To promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity and to create a basis for a future Community framework.	2001
Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport	To promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport	2003
Green Paper - Towards a European strategy for the security of energy supply	To work out strategies to guarantee Europeans clean energy at a reasonable cost and in sufficient quantity.	2004
Green Paper- A European strategy for sustainable, competitive and secure energy	Concrete proposals in six priority areas for implementing a European energy policy. These range from the completion of the internal market through to the implementation of a common external energy policy.	2006
Renewable Energy Road Map. Renewable energies in the 21st century: building a more sustainable future	Sets out the Commission's long-term strategy for renewable energy in the European Union (EU), proposes to set a mandatory target of 20% for renewable energy's share of energy consumption in the EU by 2020 and a mandatory minimum target of 10% for biofuels. It also proposes creating a new legislative framework to enhance the promotion and use of renewable energy.	2007
Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC	Set a target to increase the contribution of renewable energies to its energy mix, and 20% overall EU share of renewable energy sources by 2020. Sets a deadline for EU member states' National Renewable Energy Action Plans of 30 June 2010.	2009

Table 15. European Union's main renewable energy sources policy tools
(Source: European Commission 1997, 2010a)

Authority Act and entrusted the new Malta Resources Authority with regulation of the energy market. Enemalta remained responsible for energy distribution and for the energy grid (Gov, 2000a). In the accession period, the government negotiated with the EU Commission over the implementation of several energy related directives such as the EU directive 2001/80/EC on Large Combustion Plants. Here, the government agreed to limit the operation time of one of Malta's two power stations. Due to the high emissions of the Marsa power plant, the plant is only allowed to operate for 20,000 hours in total and must close by 31st December 2015 (MMD, 2005b). This increased the pressure to completely close down the Marsa Power Station which produces approximately 47% of Malta's total power station generated electricity (Enemalta, 2006). Hence, Malta's energy policy implementation stresses an extension of the Delimara Power Station, Malta's other power plant, a undersea interconnection to Sicily, Italy, as well as the construction of two large scale and one small scale wind farm, the installation of photovoltaic panels on public buildings, and waste to energy generation.

After Malta's accession to the EU, Malta committed itself, in line with the EU directive on the promotion of the use of energy from renewable sources, to generate 10% of its final energy consumption from renewable sources by 2020 (EC, 2009c). However, currently, Malta has almost no energy production based on renewable energy sources although the Ministry for Resources and Rural Affairs does advocate the use of renewable energy technology. The Resources Authority has introduced one-off grants for the purchase of electric vehicles, solar photovoltaic panels, solar water heaters, as well as wind turbines and roof insulation for domestic use. Further, feed-in tariffs have been introduced for energy from renewable energy sources. Another envisaged renewable energy source is waste. For example the sewage treatment plant at Ta'Barkat in Xghajra generates 30% of the plant's needed energy though biogas extraction. Additional waste to energy projects are being researched. Another important renewable energy sources in Malta is the sun. The government has installed several photovoltaic systems on public buildings. The Ministry for Resources and Rural Affairs, and several solar companies have also expressed their interest in a large-scale project to install, operate and maintain photovoltaic systems on public buildings. Nevertheless, so far, the project has not progressed even though Malta has one of the highest solar potentials in Europe (EC, 2008b).

One of the advanced large-scale projects of Malta's Ministry for Resources and Rural Affairs is the implementation of a large scale offshore wind farm at Sikka l-Bajda (Figure 12) and a large-scale land-based wind farm at Wied Rini L/O Bahrija (Figure 13), as well as a small land-based wind farm at Hal Far. The government publicly expressed its interest in wind parks at the beginning of 2004. However, the construction of a land based wind park needs un-built up land and sufficient wind resources. The offshore wind farm needs an appropriate location, depending on the wind turbine technology and the availability of wind resources. The onshore wind farms have to compete with other space users because of Malta's unusually high population density and high rate of urbanized land.

The European Commission's Joint Research Centre has identified that the biggest threat to wind energy exploitation is in finding adequate sites. Wind farms are linked to bird and bat mortality and the European Commission recommends decision-making and implementation of the policy based on precautionary principle (EUcom, 2010b). Another aspect is that people who live or work close to a wind farm describe the wind farm noise as disturbing, especially in rural and quiet areas (Pedersen et al., 2009). Therefore, wind farms have a relatively low social acceptance (EC, 2006). In Malta, environmental NGOs such as Birdlife have expressed concerns about the adverse effects of the wind farm project at Sikka l-Bajda and Wied Rini on birds (Birdlife, 2009a, 2009b). On a local level, residents fear health problems and the loss of agricultural and natural land at Wied Rini (MEPA, 2009d). By comparison, the questions over the large-scale project to install photovoltaic systems on public buildings, are mainly related to economic efficiency. Using the space on the roofs of government-owned public buildings does not change property rights or significantly restrict any other functions.

Despite the recognized challenge in finding adequate sites for the construction of wind farms, the Ministry for Resources and Rural Affairs emphasizes the proposed large-scale wind farm projects as one of the major RES policies. With regard to Malta's population density and geographical size this chapter investigates the question: *to what extent does the wind park policy spatially misfit with the place of implementation?*

Apart from information about any potential spatial misfit it is important to know where a spatial misfit originates: at the EU governance level, the national or the local level. Before EU accession, Malta's government had not considered developing a large wind park in Malta. In the preparation period for Malta's EU accession, the Ministry for Resources and Rural Affairs stressed wind and solar as having the best energy potential. After EU accession, the government stressed the development of wind parks. Malta's present RES policy focus is in line with the trend in the EU. Wind is the second most used renewable energy source after hydropower. The contribution of energy generated from photovoltaic systems in the EU is relatively small (EC, 2011b).

A potential spatial misfit could originate at the European governance level. In line with this point of view, much of the Europeanization and social-ecological resilience literature, using a misfit concept, states that a misfit is rooted in a poorly designed or incoherent higher level policy (Börzel & Risse, 2000; Cumming, et al., 2006). However, directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market does not directly force or bind national governments to promote and introduce specific non-fossil energy sources. Therefore, Malta's government is free to introduce different support mechanisms and renewable energy sources. Thus, this chapter examines the question: *to what extent do the spatial misfits originate from the common European renewable energy policies, or from Malta's national multi-actor interaction implementation process?*

Before investigating the above two questions, Sections 4.2 and 4.3 illustrate the wider context of Malta's renewable energy policy. Section 4.2 outlines Malta's renewable energy policy before EU accession. Then, Section 4.3 outlines Malta's renewable policy from EU accession to date. Subsequently, we investigate the potential spatial misfit of the wind farm projects; Sikka l-Bajda in Section 4.4 and Wind Rini in Section 4.5. Place is part of the structural context according to the Contextual Interaction Theory. In order to locate the origins of the spatial misfit we first analyse the specific, the structural, and the wider contexts by means of document analysis in Section 4.6. The section also analyses the actors' interaction process by describing the actors' core characteristics, cognitions, motivation, capacity and power, and by construing their influence on the implementation process. The origins of the spatial misfits found in the analysis will be presented in Section 4.7. Section 4.8 presents summary and conclusions.

4.2 Malta's renewable policy before EU accession

Malta's renewable policy before EU accession in 2004 was mainly focused on research into renewable energy sources. The government's interest and research on renewable energy technologies in Malta started after the second oil crisis at the end of the 1970s (Claverie, 1981). The oil crises of the 1970s encouraged the development of renewable energy technologies in Europe. Nevertheless in Malta, access to oil was safeguarded through a Cooperation Treaty with Libya. As such, Malta had no urgent need to develop renewable energy technologies in the 1970s. The friendly relationship with Libya was interrupted when Libya sent armed forces to stop Malta from drilling for oil in a disputed sea territory in 1980 (Manduca, 2008). In the same year, Enemalta, the Maltese state-owned energy company and the Austrian Ministry of Science and Research

established a public-private partnership, the Austrian-Maltese Research Centre, in Marsaxlokk. The centre investigated the technical feasibility of solar-driven air conditioning units in Malta. The project was abandoned after five years as it failed to achieve the project objectives (Solair, 2003). Subsequently, the Institute for Energy Technology of the University of Malta was established, and located in the former Austrian-Maltese Research Centre in 1988. Additionally, the government launched the Malta Council for Science and Technology (MCST), which is made up of government representatives, the private sector and the university. Up to this day, it has the mandate to advise the government on its science and technology policies (MCST, 2008). In 1990 Malta applied for EU membership.

The Institute for Energy Technology of the University of Malta launched its first solar and weather monitoring programme in 1992 (Yousif, 2002). The programme aimed to research the RES potentials in Malta. On the international level, the United Nations Conference on Environment and Development 1992 in Rio stressed that climate change was the result of fossil fuel consumption, and emphasized the need for alternative sources of energy. Malta signed the Convention in 1992. On the European level, the European Commission took the first step in liberalizing the energy and gas market, and to develop a common policy and strategy on the promotion of renewable energy sources in the EU. In 1996, the Commission published a Green Paper for a community strategy on renewable energy sources. The member states agreed on the need to set a realistic and ambitious target for renewable energy sources contribution. Strategy targets were: to enhance the cooperation between the member states on renewable energy sources, to develop and implement a policy which promotes the uses of renewable energy sources, and to develop a mechanism to monitor the progress of renewable energy sources (EC, 1996a). A year later, the European Commission agreed on a White Paper, a strategy, and a long-term objective to generate 12% of the European Union's energy consumption from renewable energy sources by 2010 (EC, 1997). On the international level, Malta signed the Kyoto Protocol in 1998.

Malta's real change from a research approach to the development of a renewable energy policy started when the government enacted the Malta Resources Authority Act, established Malta's Resources Authority, and launched the Enemalta reform in 2000. The government entrusted the Malta Resources Authority with regulating of the energy market; while Enemalta, the state-owned energy company, remained responsible for energy distribution and the energy grid (Gov, 2000a). The Authority statutorily became responsible for promoting, encouraging and regulating the generation of alternative sources of energy (Gov, 2000a). Before the reform of Enemalta, the company had no legal obligation or motivation to encourage renewable energy research and technology. The company functioned more as an authority, reliant on central government. Ensuring a basic energy supply was a higher priority than economic efficiency and environmental protection.

On the international level, Malta ratified the Kyoto Protocol in 2001 but made no commitment on emission reduction. On the EU level, the European Commission enacted Directive 2001/77/EC on "The Promotion of Electricity from Renewable Energy Sources in the Internal Electricity Market" (EC, 2001a). Through the directive, the Commission indicated, for every member state, a non-obligatory renewable energy target to achieve the 12% overall target for the EU. The Commission also started its

Sixth Framework Programme (2002-2006), "Sustainable development, global change and ecosystems", to support research and development on renewable energy technology.

In Malta, European directive 2001/77/EC on the promotion of electricity produced from renewable energy encouraged Malta to stimulate the use of renewable energy technology even though it was unclear whether Malta would join the EU in 2004. The decision depended on a national referendum which was to be held in 2003. The government enacted the regulations on energy efficiency of electric products such as hot water boilers and freezers in 2002. The Resource Authority also initiated a consultation process for the development of a "Consultation Paper on the Development of a Strategy for the Exploitation of Renewable Energy Sources for Electricity Generation". The initiative aimed to clarify the potentials and the optimization of several renewable energy sources in Malta. Furthermore, the Ministry of Resources and Rural Affairs, which heads the Resource Authority, had to develop a negotiating position towards the European Commission in respect of Malta's indicative renewable energy target set in Directive 2001/77/EC. During the accession negotiations with Malta, the European Commission indicated the non-mandatory renewable energy target for Malta. The Commission mainly based the target, of 5% of Malta's gross electricity consumption by 2010, on Malta's gross national energy consumption and national renewable energy production in 1999 (EC, 2003).

In Malta, the scoping process launched by the Resource Authority on renewable energy policy and potentials resulted in a "Draft Renewable Energy Policy for Malta" in 2006, two years after Malta's accession to the EU in 2004. The Authority distinguishes two renewable energy production scales and levels: on the one hand, large-scale central national projects and, on the other, small-scale projects at the consumer level for private use.

4.3 Malta's renewable energy policy implementation

During the accession process of Malta to the European Union, the government started to develop a strategy for the promotion and exploitation of renewable energy sources in Malta. For the development of the renewable energy plan, the Ministry of Resources and Rural Affairs authorized the Resources Authority given the expertise of the Authority's staff in renewable energy technology. Therefore, the Authority had to reorganize itself and create specific units for policy drafting and regulation (NAO, 2011). This resulted in several reports and a 2006 draft renewable energy plan. However none of the strategies or the plan was legally binding on the Ministry or the government. The reports and draft planning merely influence Malta's renewable energy policy implementation.

In 2005, the Ministry published a strategy for renewable energy exploitation in Malta, the so-called Mott McDonald report which identified wind and sun as the renewable energy sources with the most potential (MMD, 2005b). The report concluded that the indicated target set by the EU Commission of 5% was not feasible by 2010. Instead, the report recommended a target of 1%. The government continued to introduce renewable energy measures to stimulate the exploitation of wind and solar. The Malta Resource Authority reviewed the introduced grants for the purchase of electric vehicles, solar photovoltaic panels, solar water heaters, wind turbines and roof insulation for

domestic use in 2005 and 2006. For instance, the authority granted a rebate of up to 15.25% on the purchase price of an electric-powered car, and up to 20% on the purchase price an installed photovoltaic system (Gov, 2005, 2006). However, these grants did not significantly stimulate the private use of renewable energy technologies. Renewable energy experts and companies considered the grants as too low. The Ministry reported to the European Commission that the national renewable energy target would be 0.31% (EUcom, 2007). In 2006, the Authority put out a tender for expressions of interest in developing a deep water (deeper than 25 m) wind farm. However, the tender only resulted in a scoping for available technologies.

At the European Level, the Commission adopted Directive 2009/28/EC on the promotion of the use of energy from renewable sources. The Directive obliged Malta to adopt and submit a National Renewable Energy Action Plan, including a mandatory renewable energy target for 2020, to the Commission by June 2010 (EC, 2009c). The Directive stimulated the strengthening of Malta's renewable energy policy. In 2009 the Resource Authority tendered a call for expressions of interest in installing a large scale solar park on several roofs of public buildings. Furthermore, the Ministry submitted an outline application for an offshore wind farm including the laying of power cables between turbines, at Sikka l-Bajda, L/O Melliea (Figure 12) and a proposal for a land-based wind farm at Wied Rini L/O Bhrija (Figure 13), as well as for a small wind farm at Hal Far to the Environment and Planning Authority. The projects are officially in the planning phase, but the construction phase of the undersea power cables for the offshore farm has started in connection with the construction of the Malta-Sicily power-interconnector project. This project includes the construction of a electricity distribution centre at Il-Kappara, Malta, which is needed to connect the planned offshore farm to the distribution network. The target end date of this project is in 2013 (Enemalta, 2010).

Figure 12. Proposed wind farm at Sikka l-Bajda

Figure 13. Proposed land based wind farm at Wied Rini L/O Bahrija

Another measure was the start of a wind measuring campaign in 2009. Table 16 summarizes the measures and policies for the stimulation and use of renewable energy sources in Malta (MRRA, 2010a). In 2010, the Malta Resource Authority increased the grant percentage for photovoltaic systems to 50% (MARA, 2010). Further, the Authority extended the validity of the grants for the purchase of solar water heaters in the domestic sector in 2011. The grant will cover 40% of the eligible costs of solar water heating systems up to a maximum of € 400 (MARRA, 2011). The Ministry also submitted Malta's National Action Plan to the European Commission. The plan set a 10% target for energy from renewable sources in Malta's gross final energy consumption by 2020. In the plan, the Ministry confirms Malta's general energy policy objectives: energy efficiency, reducing the reliance on imported fuels, stability in energy supply, reducing the emissions from the energy sector, delivering energy efficiently and effectively, and ensuring that the energy sector can deliver. The Action Plan prioritises the exploitation of wind, sun and biomass waste as renewable energy sources, acknowledging that Malta does not have good geothermic sources. Also the use of tidal energy in the Mediterranean Sea with the current state of knowledge is technically difficult.

4.4 The proposed offshore wind farm at Sikka l-Bajda

The proposed wind farm at Sikka l-Bajda comprises up to 19 five-megawatt wind turbines with a maximum generating capacity of 95 MW. Sikka l-Bajda is a reef located to the north of Malta (Figure 12). According to the current state of knowledge for the installation of multi-megawatt wind turbines with a maximum generating capacity of 95 MW, the water depth should be not deeper than 25 m. Malta's southwest coast is mainly steep cliffs and therefore the deep water is technically inappropriate for the installation of a wind park.

The coastal area is one of the most intensive used areas in Malta. The area is used for bathing, diving, fishing, fish-farming and yachting. Sikka l-Bajda itself is identified in the 1992 Structure Plan as a candidate Marine Protected Area (MEPA, 1992). The

Name and reference of the measure	Type of measure	Expected result	Targeted group and or activity	Existing or planned	Start and end dates of measure
Grant schemes from Malta Resources Authority on SWH & PV	Financial	4.3GWh annual on 3 years	Residential	Existing	2010 - 2013
Grant schemes from Malta Enterprise on RES & EE	Financial		Industrial	Existing	2009 - 2013
Project calls from Planning and Priorities Coordination Division on energy related sectors including RES & EE	Financial	Annual penetration of 340kWp of solar, and microwind, 2-3 schemes, 1 study	Public, Non profit organisations	Existing	2007 - 2013
Wind data measuring campaign to determine wind resources potential.	Soft	National Wind potential	Investors & Public	Existing	2009-2011
AA & EIA related to potential wind farm sites	Soft	109MW in wind energy	Investors & Public	Existing	2009-2012
EoI, Tender on Public roofs allocation to PV developers	Financial	> 10MW	Investors & Public	Planned	2010-2013
Financial incentive mechanisms , e.g. FiT, Net-metering	Regulatory	Self sustained market	Auto-producers and investors	Planned	2010
Bio-fuel substitution obligation.	Regulatory	4.9ktoe in 2020	suppliers, end-users	Planned	2010
Waste segregation for RRR (Reduce, Recycle, Reuse)	Soft	behavioural change	end-users	Existing	Ongoing
EPBR implementation	Regulatory	Low carbon buildings	architects, end-users	Planned	2010
EE schemes - Free CFL's per household	Soft	behaviour change	end-users	Existing	Done in 2009
CHP promotion	Soft	behavioural change	investors & end-user	Planned	2010
Bio-fuels use in heating and generation	Soft	behavioural change	generators, end users	Planned	2011
Guidelines for micro-wind turbine installations	Soft	reducing administrative barriers	investors, architects	In consultation	2010
Promotion by the use of micro-wind turbines at Public sites	Soft	behavioural change	public	Existing	Ongoing
Promotion by the use of photo-voltaic systems at public sites and buildings	Soft	behavioural change	public	Existing	Ongoing
Setting specifications for approved technologies.	Regulatory	Ensuring quality and positive perception of RES technologies	end users	Existing	Ongoing
Public awareness campaigns on EE and RES	Soft	behavioural change	end users, students	Existing	Ongoing
Smart metering on electricity consumption	Soft	behavioural change	end users	Existing	2009 -2012
Promotion of Electrical Vehicles	Soft	behavioural change and cleaner commuting	public	Planned	2011
Promotion of Auto-gas in transport	Soft	behavioural change and cleaner commuting	public	Planned	2011
Public transport reform and promotion.	Soft	behavioural change and more efficient commuting	public	Planned	2010
Promotion of more efficient vehicles and use of bicycles	Soft	behavioural change and more efficient commuting	public	Existing	Ongoing
Training & certification of installers	Soft	behavioural change	Installers	Planned	2010-2012

Table 16. Renewable energy measures and policies
(Source: Malta Ministry for Resources and Rural Affairs 2010a)

sea grass Posidonia oceanica, protected by the Habitat Directive, surrounds the reef and the area. The area is designated as a Special Area of Conservation. The reef is also close (approximately 1,5km) to Rdum tal-Madonna, which is protected by national law (Environment Protection Act, 2001 and Development Planning Act, 1992) and by European law (Birds Directive and Habitat Directive) (MRRA, 2009c). Rdum tal-Madonna has sheer cliffs and crumbling limestone shores, and is located in the North-East of Malta. The area is habitat to 10% of the world's population of Yelkouan Shearwaters and part of the EU co-founded EU LIFE Yelkouan Shearwater Project. Furthermore, the wind farm would be located approximately 5 km away from the tourist areas of St. Paul's Bay, Bugibba and Qawra, and approximate 4 km from a residential area, Santa Marija Estate.

Already before and during the scoping process for the wind farm project in 2009, environmental NGOs and the Environment and Planning Authority recognized the sensibility of the area and the possible adverse effects of the wind farm on the area (MEPA, 2009c). Despite the environmental constraints, the Ministry temporally installed an 80-metre high wind mast at L-Aħrax point in November 2009 to measure the wind conditions at Sikka l-Bajda. The wind monitoring studies resulted in typical offshore conditions. In 2009 the government decided to further assess the site for the construction of the wind farm. The Minister and the Prime Minister declared that the decision to construct the wind farm would depend on the results of an Environment Impact Assessment. In 2011, the Ministry declared that the study period would be extended for another two years. Accordingly, the Ministry has yet to complete the full Environmental Impact Assessment.

4.4.1 The place characteristics of Sikka L-Bajda

In order to analyze a spatial misfit it is necessary to know the spatial characteristics of the place. According to our place concept, Sikka l-Bajda can be understood as the place of implementation and as having boundaries, key functions, nature, as well as cultural and other values. Following a description of the place characteristics, Section 4.4.1 investigates possible spatial misfits.

The boundaries

The 1992 Structure plan notes Sikka L-Bajda as a candidate Marine Protection Area. However, legally, this status does not give full protection to the area in the sense that no development activity will be permitted. As such no institutional boundaries are created by the Structure Plan. Nevertheless the sea grass Posidonia oceanica is listed in Annex I of the Habitat Directive, which makes it a habitat type of interest to the EU. Accordingly, Malta designated the area as a Special Area of Conservation. This protection creates institutional boundaries as it limits the development possibilities of a wind farm. The Environmental Impact Assessment first has to prove that a wind farm construction would have no adverse effects on the sea grass. Further, physical boundaries are created through the depth of the seabed. Although the seabed at Sikka L-Bajda is shallow enough (lesser than 30m), the reef includes several caves which limits the location of wind turbines (Peregin, 2010).

The functions
In general, Malta's shallow costal area is one of the most intensively used areas. On the coast, hotel facilities and bathing are the main activities. The coastal area therefore functions as an important recreational and touristic place. The closest touristic locations are Bugibba and Qawra, making it one of Malta's main touristic areas. The Sikka l-Bajda area has functions for commercial purposes such as bunkering (supplying sea vessels with fuel and providing other services) and fish farming. Further, some recreational activities such as yachting, diving and fishing takes place in the area. Other functions are related to the nature and are described in the next section.

The nature
Sikka l-Bajda is covered by Maerl beds. Maerl sediments are habitats which support a high species diversity. The biodiversity of Marel sediments is so high that Maltese fishermen call it a living sediment. The Maerl bed is very fragile and a non-renewable resource (Barbera et al., 2003; Sciberras et al., 2009). Although the reef is no longer in a fully natural state since it was damaged by bunkering and bombing during the Second World War, it remains a habitat for highly sensitive species such as the sea grass Posidonia oceanica. The sea grass provides a breeding habitat and a home for many species of fish. Furthermore, studies have shown that the sea grass promotes sediment stability and reduces the erosion of the coastal zone (Gacia & Duarte, 2001). Another aspect is the protected neighboring Yelkouan Shearwater breeding area at Ramla Tat-Torri/ Rdum Tal-Madonna.

The values
The values of the area are closely linked to its natural importance. The value of the sea grass is institutionalized by the Habitat Directive. According to Kellert's value classification (see detailed examination in Section 2.2), the need for conservation is partly rooted in ecological-scientific values since the complexity of the ecosystem is not yet fully understood. Scientists and environmentalists in Malta therefore bestow a high ecological-scientific value on the area. The sea grass also has an important function in the protection against coastal erosion such that the EU Commission, the government and scientists bestow utilitarian and moralistic value on the area. From this point of view, Sikka l-Baijda needs to be protected for the security of current and future generations. People who use the area for recreation mainly bestow aesthetic and naturalistic values on the area. Currently, the reef is a popular diving place due to its rich nature. Moreover, especially the environmental NGOs give a high humanistic value to the area. They feel an emotional attachment to Sikka l Bajda as a habitat for protected birds.

4.4.2 Spatial misfits in the Sikka l-Bajda project

Having described the place characteristics, it is now possible to compare the characteristics and identify possible spatial misfits. For this purpose, the wind farm is considered as a place. By comparing the four identified characteristics of Sikka l-Bijda with the wind farm we will investigate: *to what extent does the Sikka l-Bajda wind farm policy spatially misfit with the place of implementation?*

According to our spatial misfit concept, a spatial misfit is an incongruence of the implementing policies with the boundaries, the important functions and nature as well as with cultural and other values of a place. Any, or all, such incongruences make the measures inapt and/or inapplicable. Table 17 presents the findings from the comparison of the characteristics which are further elaborated in the sections that follow.

	Place	**Policy**	
Characteristics	**Sikka l- Bajda**	**Offshore wind farm**	**Misfit**
Boundaries	**Institutional:**	**Institutional:**	
	Environment and Planning Authority	Ministry for Resources and Rural Affairs	/
	Special Area of Conservation of International Importance		+
	Geographical:	**Geographical:**	
	Fixed / permeable	Fixed/ permeable	/
Functions		Energy generation	/
	Habitat	Habitat	+
	Recreation		/
	Fishing		-
	Fish farms		-
	Yachting		-
Nature	High biodiversity	Low biodiverty	/
	Sea grass		+
	Maerl beds		+
	Sea birds		/
Value	Moralistic	Moralistic	/
	Aesthetic	Aesthetic	/
	Utilitarian	Utilitarian	/
	Naturalistic		+
	Ecologistic-scientific		+
	Humanistic		+
		Symbolic	/
+ Misfit	- Fit	/ Partly misfit	

Table 17. Sikka l-Bajda case comparison of place characteristics and identification of misfits

Boundary misfit

In terms of institutional aspects, both the Environment and Planning Authority and the Ministry for Resources and Rural Affairs are responsible for the environment. The Ministry for Resources and Rural Affairs is mandated to promote projects which are aimed at conserving, enriching and upgrading the Maltese landscape, and to protect Malta's natural heritage. Further, the Ministry is responsible for policy development related to alternative energy sources (MRRA, 2010b). The Environment and Planning Authority is responsible for the environment in general. Hence, institutionally, the authorities in permitting the construction of a wind farm, and developing the wind farm policy, have the mandate to take into account the nature and other functions of the place. However, the wind farm is an industrial development which institutionally does not fit with the designation of Sikka l-Bajda as a Special Area of Conservation of national importance. Accordingly, from an institutional aspect, the wind farm partly misfits. With regard to the geographical boundaries, the boundaries of Sikka l-Bajda as a wind farm area are fixed but the entire area is also a habitat which has permeable

boundaries. The construction of the wind farm adds new physical fixed boundaries to the area in both the sea and the air. Although the wind turbines and the cables are physically fixed to a certain place, noise and electromagnetic fields can affect the wider sensitive marine environment. For instance, studies have shown that noise during construction can affect some species 15 km away from a wind turbine (Thomsen et al., 2006). A wind farm can also create a hazard for birds, and therefore the Environment and Planning Authority required an assessment of the impacts on birds due to the risk of collision (MEPA, 2009b, 2009c). Hence, the added boundaries partly misfit with the boundaries of the area.

Function misfit

As described earlier Sikka l-Bajda has multiple functions. In comparison, the wind farm only has the function of generating energy. Considering the wind farm in operation, some of these functions spatially fit. Studies have shown that, during operation, a wind farm does not significantly disturb fishing (including by boat and angling), fish farming and yachting (Larsen et al., 2005; Petersen & Malm, 2006; Thomsen et al., 2006). However these functions can be disturbed during the construction period and the wind farm would partly misfit with some other recreational activities. Currently the reef is a popular diving area due to its natural beauty. A wind farm construction would partly destroy this beauty. Other recreational users of the coastal area fear the loss of the undisturbed view. For example, surveys among coastal users in Denmark illustrated that most users are concerned about the visual impact and want to have the wind farm located no closer than 8 km from the coast (Ladenburg & Dubgaard, 2009). The wind farm at Sikka l-Bajda would be located approximately 5 km away from touristic areas. With regard to the place's function as a natural habitat, the energy production-related noises and electromagnetic fields could have adverse effects on Sikka l-Bajda as a habitat. Conversely, the wind turbine foundations can function as an artificial reef. However, studies show that the biodiversity on wind farm foundations is much lower than on a natural reefs, and that the artificial habitat attracts different species which facilitates the spread of non-native species (Petersen & Malm, 2006). With regard to this function of Sikka l-Bajda, the wind farm spatially misfits. The wind farm also misfits with the bunkering activity as this would have to stop in this area.

Nature misfit

As already indicated, the wind farm spatially misfits with the function of Sikka l-Bajda as a habitat. Even though the foundations of the wind farm will function as an artificial reef, the destruction of the Maerl beds and sea grass during the construction phase of the wind farm will be irreversible. Recovery of the Maerl beds is almost impossible (Barbera, et al., 2003). Furthermore, studies have demonstrated that the sea grass Posidonia oceanica is very sensitive to changes of light. The wind turbines create shadows which limit light availability and hence the growth of the sea grass (Alcoverro et al., 1995). Accordingly, the wind farm misfits with the nature of Sikka l-Bajda. With regard to the neighboring Yelkouan Shearwater breeding area at Ramla Tat-Torri/Rdum Tal-Madonna, experts of the Natura 2000 Shearwater project fear that the very sensitive birds will be disturbed through the shadows and noise of the wind farms. Especially the construction phase can have an adverse effect (Birdlife, 2009c). Other studies confirm that, in some cases, wind farms have had a negative impact on the local bird population

but these results are not consistent (Stewart et al., 2007). Similarly, Malta's strategy for renewable energy exploitation recognizes that the possible impact of wind farms on bird mortality is a matter of concern (MMD, 2005b). Hence there is a high possibility that the wind farm will partly misfit with the Natura 2000 project.

Value misfit

People bestow on both the area of Sikka l-Bajda and the wind farm values which are rooted mainly in humanistic, aesthetic and utilitarian thoughts. On the one hand, the local environment at Sikka l-Bajda needs to be protected. On the other hand, wind farms lower CO_2 emissions and contribute to the overall environmental protection. From the aesthetic point of view, coastal users enjoy the undisturbed view of the sea. The wind farm construction partly misfits with the aesthetic values of these coastal users. At the same time, governmental actors and stakeholders, such as the tourism sector and environmentalists, generally regard a wind farm as a symbol of sustainable development and environmental protection. This highly symbolic value of a wind farm lowers its negative aesthetic impact. For that reason, the wind farm partly misfits with the aesthetic values, but fully spatial misfit with the naturalistic-rooted values.

From a moralistic perspective, many scientists and Maltese people favour photovoltaic systems on public and private buildings since these do not destroy natural areas of Malta. Therefore, the wind farm development partly misfits with some moralistic values that actors and stakeholders bestow on the Sikka l-Bajda area. Furthermore, the wind farm misfits with the ecological-scientific and humanistic values. Environmentalists and users who emotionally feel a strong attachment to Sikka l-Baijda and related habitats recognize that a wind farm will significantly destroy the natural value. However, from a governmental perspective, the utilitarian value of the wind farm is high. It will significantly help to secure Malta's energy needs and improve Malta's air quality. From a touristic point of view the wind farm can also function as a touristic attraction, which also adds a utilitarian value to the area. In comparison, the Sikka l-Bajda reef also has a utilitarian value as it supports coastal protection and is used as a diving and fishing ground. The utilitarian value spatially misfits in that the development of the wind farm will change the ecosystem of Sikka l-Bajda and disturb its function in coastal protection.

Summary

The analysis of the characteristics of the place do not result in a spatial misfit of the wind farm with all the characteristics of the place. A spatial misfit appears with regards to the zoning, protection and conservation legislation and practice. The protected area is home to endangered and sensitive species. Sikka l-Baijda and the nearby Natura 2000 area have created a valuable habitat for these species. The wind farm, and especially the construction phase, disturbs and destroys the habitat, and this creates a spatial misfit according to the definition used. However, most of the recreational functions of the place will not be significantly disturbed. The wind farm also spatially misfits with the values which are bestowed on the protected habitats. At the same time, the wind farm itself is considered as symbol of environmental protection and sustainable development, having a high utilitarian value for the overall environment.

4.5 The proposed onshore wind farm at Wied Rini L/O Bahrija

The proposed land-based wind farm will be located at Wied Rini on the northwest coast of Malta near to Bahrija and Mtahleb. The wind farm extends from Wied Rini to an area known as tal-Merhla that lies on the limits of Mtahleb (Figure 13). The farm will include up to twelve wind turbines and will have a capacity of 10.2 Megawatts. Underground cables will connect the wind park to the national electricity grid. In 2005, the Institute for Energy Technology at the University of Malta identified the area as a potential large-scale wind farm site based on technical criteria, the required land (approximate 153 square kilometers) and the wind resource potential (Farrugia et al., 2005).

Currently parts of the area are protected at national, European and international levels and designated as a Natura 2000 site, a Special Protected Area, an Area of Ecological Importance, an Area of High Landscape Value and Protected Landscapes (IUCN Category) (MRRA, 2009a). Back in 1996, the area was already declared as an Area of Ecological Importance. Wied Rini is habitat to garigue, shrubs, wild flowers and wild orchid species. The area is an important breeding area for several internationally protected birds and the wind farm would be located around 250 meters from the cliffs at Mtahleb, which is designated as a Special Protected Area for birds. Further, the area has an important agricultural value.

In 2009, the Ministry for Resources and Rural Affairs submitted a Project Description Statement to the Environment and Planning Authority to assess if an Environmental Impact Assessment would be required. The scoping process reflected major concerns about the effects of the wind farm on the environmental and cultural heritage. The local council and residents highlighted the environmental impact, the loss of agricultural land, noise, vibrations and shadow flicker (MEPA, 2009b, 2009d). At the beginning of 2010, the Ministry called for tenders to carry out an Environmental Impact Assessment. So far, the Environment Impact Assessment has not been finished.

4.5.1 The place characteristics of Wied Rini L/O Bahrija

The following section elaborates the characteristics of the place Wied Rini L/O Bahrija.

The boundaries

Institutionally, the boundaries of the area are determined through the 2006 approved North West Local Plan. The overall strategy of the plan is to protect the environment, to sustain rural communities and to encourage agriculture as well as to satisfy economic development needs (MEPA, 2006). Parts of the area are designated by the plan as a protected area of Agricultural Value. In this area, the policy is to enhance farming and to protect the resources. Additionally, parts of the determined wind farm site are designated as Areas of High Landscape and Conservation Value (Figure 13). The policy for this area is to protect the area against developments. Geographically, the area verges on the cliffs at Rdumijiet ta'Malta, Ras il-Pellegrin and Ix-Xaqqa, a Natura 2000 site. Furthermore, the area is fragmented by some rural roads and fields.

The functions
Currently, the area is mainly used for recreation, such as cycling, hiking and picnicking, and for farming. The site consists not only of fields but also includes some rural settlements made up of farmhouses and villas. Additionally, the area once hosted a radio receiving station which is still used as a telecommunications station. The Armed Forces of Malta also use the station for surveillance activities. Apart from these human activities, the area is an important natural habitat. This function is elaborated in the following section.

The nature
The nature of the proposed wind farm site is diverse and unique. For instance, the area hosts the rare endemic orchid Anacamptis urvilleana and the orchid Ophrys melitensis which are listed species on the Habitats Directive. Additionally the adjacent area, a Natura 2000 site, and Wied Rini are habitats to several bird species including species protected by the Birds Directive including the Short–toed Lark Calandrella Brachydactyla. The area is also important for migratory birds such as the honey-buzzards.

The values
Institutionally, the value of the area is determined by the North West Local Plan. The plan recognizes the agricultural and natural value of the area. Although the area has no recreational importance according to the plan, Wied Rini is an important recreation area for many Maltese people and tourists. Due to these functions and the institutional status as a protected and conservation area, Wied Rini has high ecological-scientific and moralistic values as well as a high naturalistic value which arise from the experience and the contact with nature. The area needs to be conserved due to its ecological importance and for current and future generations.
Furthermore residents and environmentalists bestow an aesthetic and humanistic value on the site. The landscape is symbolic of a typical Maltese rural region which supports the cultural identity. Additionally, for the farmers and the tourist industry, the area has a utilitarian value. Farmers' incomes depend on the produce, and the tourist industry benefits from the landscape and the symbolic value.

4.5.2 Spatial misfits in the Wied Rini L/O Bahrija project

The proposed wind farm can be understood as a place as such, and one that does have boundaries, functions, nature and values. Table 18 lists the spatial misfit findings, resulting from the comparison of the characteristics of the Wied Rini area and of the wind farm. The following sections elaborate on these results.

Boundary misfit
As with the Sikka l-Bajda wind farm case, the institutional responsibility for the area is shared by the Malta Environment and Planning Authority and the Ministry for Resources and Rural Affairs. As previously explained, both have a mandate to protect the environment. Nevertheless, from the institutional point of view, the wind farm is an industrial development which does not fit with the institutional boundaries of the area as a conservation and protected region. In terms of the physical aspects, the wind turbine

foundations require a certain amount of space and create new boundaries for flora and fauna. This is a habitat loss and therefore the new boundaries spatially misfit. As with the Sikka l-Bajda case, noise pollution, shadow flicker and magnetic fields are transposed far into the area. As such, the boundaries are permeable. The area is currently a rural quiet area, and the wind farm introduces new noises and visual boundaries, that partly misfit.

	Place	**Policy**	
Characteristics	**Wied Rini L/O Bahrija**	**Land wind farm**	**Misfit**
Boundaries	**Institutional:**	**Institutional:**	
	Environment and Planning Authority	Ministry for Resources and Rural Affairs	/
	Special Area of Conservation of International Importance		+
	Areas of High Landscape and Conservation Value		+
	Agricultural Value		+
	Geographical:	**Geographical:**	
	Fixed / permeable	Fixed/ permeable	/
Functions		Energy generation	/
	Habitat		+
	Recreation		/
	Farming		/
	Living area		+
Nature	High biodiversity	Low biodiverty	+
Value	Moralistic	Moralistic	/
	Aesthetic	Aesthetic	/
	Utilitarian	Utilitarian	/
	Naturalistic		+
	Ecologistic-scientific		/
	Humanistic		+
		Symbolic	/
+ Misfit	- Fit	/ Partly misfit	

Table 18. Wied Rini case comparison of place characteristics and identification of misfits

Function misfit

The area is mainly a natural habitat and is used for recreation and farming. The wind farm will destroy the undisturbed contact with nature. Other recreational activities will be disturbed but not to such an extent that they cannot take place anymore, such as hiking, picnicking and bicycling. Hence with regard to recreation the wind farm partly misfits. Considering the farming activity, most of the planned wind turbines are not located on agricultural land and so the wind farm will not significantly disturb the farming activity. If a wind turbine is located on agricultural land, the wind turbine will occupy a significant amount of agricultural land, because the size of the average farm is no more than one hectare (NSO, 2001). However, a wind farm does not fully conflict with farming activity or significantly change the quality of the farming ground. In terms of the farming activity, the wind farm will fit provided that the wind turbines are not built on agricultural land. If they are, the wind farm would partly misfit.

Considering the function as a natural habitat, the wind farm would fragment the habitat. Moreover, the places where the wind turbines are located are lost to nature.

Furthermore, during the construction phase, vulnerable species can be irreversibly harmed. For this reason, the wind farm spatially misfits with this function. Although the area is partly a protected area, some farmhouses and villas are located in the area. Studies show that almost all people who live close (within 2.5 km) to a large wind turbine (500 kW or greater nominal electric power) experience the wind turbine noise as annoying (Pedersen, et al., 2009). Hence the probability is high that any wind turbines which are closer to rural settlements will significantly disturb the residents. The wind farm therefore misfits with the function as a residential area.

Nature misfit
The area is a highly protected environmental conservation area that hosts vulnerable flora and fauna. The probability is very high that sensitive flora and fauna will be destroyed, especially during the construction phase. Furthermore, the wind farm construction will fragment the habitat and the place where the towers are located are lost habitat. As explained earlier, studies on other wind farms show that, in some cases, birds and bats are adversely influenced by the wind farm. Even though these studies are not consistent in their results, the wind farm will spatially misfit with nature (Stewart et al., 2007).

Value misfit
Many users of the place who feel the recreation and satisfaction values of the place through direct contact and the "quietness" of nature bestow naturalistic values on the place. They consider the wind farm as a disturbance. Many residents and farmers who have a personal and emotional attachment to their belongings, and bestow humanistic values on the place, also consider the wind farm as a significant annoyance (MEPA, 2009b, 2009d). From this point of view the wind farm spatially misfits. However, the wind farm on the other hand is a symbol for sustainable development and nature protection. Moreover, the wind farm contributes to improving Malta's air quality and the overall environment. Therefore it only partly misfits with the aesthetic and moralistic values. With regard to the ecological-scientific value, experts from Birdlife fear that the wind farm will significantly disturb sensitive birds (Birdlife, 2009a). Nevertheless, since the full causality of bird mortality is unknown, the wind farm only partly misfits with the ecological-scientific value. As with the Sikka l-Bajda case, the wind farm has a high utilitarian value as it contributes to energy supply, and it is a strong symbol of environmental friendliness.

Summary
As in the Sikka l-Bajda case, the wind farm at Wied Rini misfits with the boundaries and functions with regard to nature conservation and protection. Furthermore, the wind farm will be located close to settlements which creates a spatial misfit. The values which are closely linked to quietness and contact with nature, as well as to the rich biodiversity of the area, also spatially misfit. The wind farm construction will significantly disturb nature and devalue the area as a natural recreation area. However, the area can still function as a recreational area. Other values such as the utilitarian value of the area will remain.

4.6 Investigating the origins of the spatial misfit

From the previous content analysis of the project prescription, the protocol of the scoping meetings and interviews, as well as wind farm literature, it becomes clear that the wind farms, in both cases, spatially misfit with the institutional boundaries created through the zoning policy of conservation and protected areas. The wind farm constructions also spatially misfit with very vulnerable and sensitive habitat and species which are already under threat due to human activities. Furthermore, humanistic-rooted values of people who feel attached to or love a certain landscape and its appearance, as well as people who use the area for recreation and enjoy the "quietness" of nature, consider a wind farm as a significant disturbance.

Recognizing the existence of a spatial misfit, it is important to clarify where the spatial misfit originates. According to our spatial misfit definition, the implemented policy is incongruent with the characteristics of the place. Hence a spatial misfit can originate within the policy. The Maltese wind farms must also be considered in the European context since Malta had not started to develop a wind farm policy before EU accession. Furthermore, the spatial misfit can originate in the policy implementation process as such. In our spatial misfit concept, congruence is an active element as we assume that policy can be adjusted to reach agreement. The misfit can originate at the local level, national and the European levels. As such the next sections investigate the question as *to what extent do the spatial misfits originate from the common European renewable energy policies or from Malta's national multi-actor interaction implementation process?*

The question is relevant because its answer will direct further attention to improving future renewable energy policies: either towards a greater sensitivity in European policies to spatial differentiation, or towards better guidance for national, regional and local implementation processes. To investigate the origins of the spatial misfit, the context of the policy implementation process needs to be examined. The contexts and the actors in both cases are almost identical. The political context, the governance structure and case-specific circumstances embed the interaction processes of the actors and influences them.

4.6.1 The implementation context

This section analyzes the three layers of the policy implementation context. Initially, the Specific Context will be examined. The Specific Context comprises the case-specific circumstances, including the characteristics of the place, and previous decisions and targets. Subsequently the Structural Context will be investigated. The multilevel governance structure is part of this context, as well as the more general EU, national renewable energy goals and strategies. Resources and responsibilities are also part of the Structural Context. The third layer is the Wider Context which refers to the political, economic, cultural, and technological context.

The content analysis of key policy documents and newspapers is partly achieved using the Nvivo word-frequency count approach. The word frequency count measures the degree of sensibility of key policy documents towards the characteristics of the place. One must be aware that the word frequency does not have an end in itself but is used as a tool to interpret the policy document context. Here, we identify the issues

which are crucial in the key documents. It is assumed that important concerns are represented by words. Some words are significant for the document but insignificant for our concept of place. We calculate the word frequency-weighted percentage of the 1000 most frequent words. The more often a word is used, the more importance it has in the sense that the document emphasizes it. Unimportant here does mean not that the word is unimportant in itself. Some words are important within the context in which they are used even if they have a low frequency in the entire document. The highest weighted percentage is considered as "very important", the half as "important", the quarter is "less important" and every percentage below the eights is considered as "unimportant".

Based on our preliminary document research we assume that the key words listed below (Table 19), represent the characteristics of the place. The key words and the context reflect to what extent, and how, the key documents address the place where the wind farms are to be built.

Characteristic of the Place	Representative words
Boundaries	Area, areas Site, sites Land Plan, plans, planning Location, locate Zone
Functions	Agriculture, agricultural Beach, beaches Farmer, Farmers Fishing Field, fields Recreation Hiking Bicycling Diving Boat, boating Breed, breeding Reserve, reserves, reservations Residential, residence
Nature	Environmental, environment Landscape Nature, Natura Habitat Reef Birds See grass
Values	Archaeological Conservation Cultural Historical Impact, impacts Landscape Protection, protected, protecting, protect Value

Table 19. Words representing the characteristic of the place Sikka l-Bajda and Wied Rini case

The specific context

The specific context of Malta's two wind farm projects is created by the preliminary studies, analyzed and reinforced in the 2005 Strategy for Renewable Electricity Exploitation in Malta, the so called "Mott McDonald" report, and the Project Description Statements for Sikka l-Bajda and Wied Rini l/o Bahrija. Furthermore the public discussion and opinion as reflected in the newspapers are part of the specific context.

The Mott McDonald report was very decisive for the determination of the wind farm sites. This report identified and characterized Malta's renewable energy sources, and suggested several policy options to support renewable energy in Malta (MMD, 2005a, 2005b). According to the word frequency analysis, the report focuses on the renewable energy source of wind, and the associated costs. "Wind" is the most frequent word (1.30). The institutional, and partly the natural, boundaries are recognized in the report. In most cases, "plans" refers to the existing Structure Plan and local planning as well as planning barriers which refer to legally available land. The characteristic nature is also recognized as important, although it is less important than for example the boundaries. The report does not recognize the functions and only poorly the value of the place (Table 20).

Place characteristics	**Representative words Mott McDonald**	**Word frequency* Mott McDonald**
Boundaries	Area, areas Plan, plans, planning	0.45 0.59
Functions		
Nature	Environment, Environmental Landscape Nature	0.37 0.13 0.06
Value	Value Protection, protected, protecting, protect	0.11 0.11

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: wind 1.30

Table 20. Represented place characteristics in the Mott McDonald report

Additionally the Project Description Statements for Sikka l-Bajda and for Wied Rini l/o Bahrija outline the specific project conditions and preliminary decisions. For a easier comparison, the results of the word frequency analysis are presented together in Table 21. The word frequency count shows that the boundaries in the Sikka l-Bajda project have a high importance. The word "site" is the second most frequent word (1.44) after "wind" (2.60). In the project statement the word "area" usually refers to the prospective wind farm area and indicates a high importance given to the protection and conservation areas. With regard to the functions, the study mentions some functions of the area but based on the word frequency calculation they do not have a high importance. Furthermore, the study recognizes the value. The word "impact" and the context analysis show that the study is very concerned about the impact of the wind farm on communications and airfield operations, the noise impact and shadow flicker effects, marine life and birds. In the case of Wied Rini l/o Bahrija, the word frequency analysis of the project description indicates that, as in the other case, boundaries are important. However with regard to the other characteristics, they are less so or unimportant according to the word frequency analysis. The functions of the place are not recolonized.

The word frequency count analysis of the public opinion about wind farms includes an analysis of governmental and non-governmental press releases as well as articles by journalists in the four most read general newspapers in Malta: The Times of Malta, The Sunday Times of Malta, Malta Today and The Malta Independent. Public opinion partly reflects local attitudes but also the important aspects of the wind farm projects in Malta.

Place characteristics	Representative words Sikka l-Bajda	Word frequency* Sikka l-Bajda	Representative words Wied Rini	Word frequency.* Wied Rini
Boundaries	Area, areas Site, sites Location, locate	0.95 1.44 0.42	Area, areas Site, sites Location, locate Plan, plans, planning	0.67 1.23 0.38 0.17
Functions	Fish, fishing Boat, boating Breed, breeding Bunkering, bunker Residential, residence	0.31 0.09 0.08 0.10 0.10		
Nature	Environmental, environment Habitat Nature, Natura	0.43 0.12 0.20	Environmental, environment Nature, Natura Water	0.25 0.11 0.14
Value	Conservation Impact, impacts Protection, protected, protecting, protect	0.18 0.61 0.19	Impact, impacts Protection, protected, protecting, protect	0.50 0.14

* Word frequency weighted percentage out of the 1000 most frequent words
Sikka l-Bajda, highest word frequency: Wind 2.60 Wied Rini, highest word frequency: Wind 3.16

Table 21. Place characteristics represented in Sikka l-Bajda and Wied Rini Project Description Statements

Place characteristics	Representative words Sikka l-Bajda	Word frequency* Sikka	Representative words Wied Rini l/o Bahrija	Word frequency* Wied Rini
Boundaries	Area, area Site, sites	0.30 0.67	Site, sites Area, areas	1.12 0.49
Functions				
Nature	Reef Environment, Environmental	0.24 0.32	Environmental, Environment Birds	0.20 0.23
Value	Impact, impacts	0.31	Impact, impacts	0.49

* Word frequency weighted percentage out of the 1000 most frequent words
Sikka l-Bajda, highest word frequency: Wind 3.37
Wied Rini, highest word frequency: Wind 3.48

Table 22. Place characteristics represented in the public media Sikka l-Bajda and Wied Rini case

The word frequency analysis (Table 22) shows that the public discussion recognizes the boundaries in the case of the Wied Rini wind farm as "important". Furthermore, the nature and the value are recognized. However according to the word frequency count, the functions are not considered in the public discussion. The word frequency count confirms other studies about public attitudes (MEPA, 2010). The energy supply, the costs, as well as the proper conduct of affairs, including a proper Environmental Impact Assessment and the participation of stakeholders, are of major public importance.

The analysis of the specific context, based on the case-specific documents and previous studies, indicates that the documents stress the importance of the boundaries and nature. The functions and values are less important or unrecognized. The analysis of the characteristics of the place (Sections 4.4.2 and 4.5.2), which are part of the specific context, showed that it is mainly the boundaries and nature that spatially misfit. The functions and values only partly spatially misfit. This can be understood in the sense that studies which examined wind farming in Malta in general, and specific in the case of Sikka l-Bajda and Wied Rini l/o Bahrija, indicate the high potential for a spatial

misfit with the boundaries and nature. It should be noted that although the Mott McDonald reports discusses several renewable energy sources, it emphasizes wind farms. giving that the report is very decisive in Malta's renewable energy policy, this partly explains why the wind farms have a high national priority. Furthermore, the spatial misfits and the focus of governmental actors on the boundaries and the environment indicate why governmental and other actors emphasize the importance of the environmental impact assessment.

The structural context

The structural context embeds the general policy and creates the framework for the Sikka l-Bajda and Wied Rini l/o Bahrija wind farm projects. At the national level, Malta's draft renewable energy policy and Malta's National Renewable Energy Action Plan as required by article 4 (2) of Directive 2009/28/EC are the main guiding policy documents. Although Malta's draft renewable energy policy is not legally binding, it does indicate the renewable policy direction. At the EU level the EU Commission and Parliament have enacted several directives and regulations which directly and indirectly influence the national renewable energy policy (Appendix). One of the most important directives is Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources, amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC. In addition to the directive, the Renewable Energy Road Map also guides the national policy. The national and EU renewable strategies determine the more general renewable energy goals. To identify the origin of the spatial misfit, it is important to know to what extent these strategies and guidelines recognize the place of implementation.

Place characteristics	**Representative Words draft policy**	**Word frequency* draft policy**
Boundaries	Area, areas	0.15
Functions		
Nature	Environment, Environmental Landscape Nature Bird	 0.60 0.09 0.08
Value	Impact, impacts	1.02

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Energy 2,31

Table 23. Represented place characteristics in the draft renewable energy policy document

The analysis of Malta's draft renewable energy policy shows that the term "energy" (2.31) has the highest word frequency percentage. The word "impact" has a relatively high word frequency and hence importance (1.02 see Table 23). The analysis of the word context of "impact" shows that the word mainly refers to the environmental and visual impact. This demonstrates that the draft renewable energy policy recognizes the value of the place. Important also is the "environment" (0.60), indicating that the place characteristic of nature is recognized. Recognized, but not important according to the word frequency, are the boundaries, represented by the word "area". The draft policy does not recognize the functions of a place.

In comparison, Malta's National Renewable Energy Action Plan does recognize the characteristics of the place, but with little importance based on the word frequency count. The term "plans" refers in some cases to the action plan and in others to

renewable energy plans but, in most cases, to Malta's land use development and planning (Table 24).

Place characteristics	Representative Words Action Plan	Word frequency* Action Plan
Boundaries	Area, areas Plan, plans, planning	0.23 0.92
Functions	Agriculture, agricultural	0.12
Nature	Environment, Environmental	0.35
Value	Impact, impacts Protection, protected	1.02 0.22

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Energy 2.29

Table 24. Represented place characteristics in the Malta's National Renewable Energy Action Plan

Considering the EU level, the focus of Directive 2009/28/EC and the Renewable Energy Road Map is similar to Malta's national policy on energy. The word "energy" (2.84) has the highest word frequency. Other important issues are renewable, member states and biofuel. Often mentioned, but categorized according to the word frequency count as "less important", is the word "target". The directive and the road map are more general and do mention the place characteristics but, according to the word frequency count, without giving them importance (Table 25). For example, the EU policy mentions the impact of biofuel production on land use, agriculture and the environment. Other words, like "plans" and "value", do not refer to the characteristics of the place but are mainly used in a different context.

Place characteristics	Representative words renewable energy policy documents	Word frequency*
Boundaries	Land Area	0.31 0.16
Functions	Agriculture	0.13
Nature	Environmental, environment Nature, Natura	0.11 0.17
Value	Impact	0.16

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Energy 2.84

Table 25. Place characteristics represented in the key EU renewable energy policy documents

The analysis shows that the national policy documents emphasize the environment and the impact of the policy on the place more than the EU policy documents. This indicates a difference between national and EU policies. Malta's policy is more concerned with the implementation of the policy, its physical effects, and its acceptance by the public, although Malta's draft renewable energy policy poorly recognizes the boundaries. The EU policy is more concerned with communicating the renewable energy target, as such, to the member states. The high importance of the EU target creates a form of pressure which motivates Malta's governmental actors to support renewable energy. However, neither Malta's national nor the EU policy stress wind energy sources. Hence, the spatial misfit does not solely originate in the structural context.

The wider context

The wider context includes the political, the cultural, the economic and the technical contexts. The implementation of renewable energy technology is highly dependent on

the technology, the site, and the availability of natural energy sources. Malta's geographic situation, with the sea-bed around the island shelving to approximately 100 m deep, economically limits the use of wind resources. Deep-water wind turbines or floating platforms are economically not feasible. Other technologies such as offshore wave energy exploitation is still in the test phase (MMD, 2005b). Another potential resource is waste, although this resource is limited and could only partly contribute to Malta's renewable energy production.

Malta has one of the highest solar potentials in Europe, so the sun is its richest resource (Suri et al., 2004). Nevertheless, the economic cost of photovoltaic technology is relatively high for individual Maltese households, even with the government's cost-sharing measures (MMD, 2005b). The government did start public awareness campaigns to influence the cultural context and attitudes towards renewable energy (MRRA, 2010a). The Environment and Planning Authority changed the 2007 Development Control Policy and Design Guidance and included that "MEPA will encourage the provision of photovoltaic solar modules" (MEPA, 2007). From the cultural aspect, the majority of Maltese residents would pay a little more for energy from renewable energy sources and are willing to invest in energy efficient devices (MEPA, 2010). However, private investment has not significantly increased the investment in photovoltaic systems. For many Maltese residents, the economy and the environment have a high priority, but renewable energy and related issues, such as climate change, are not Malta's largest concerns (MEPA, 2010).

Summary

The analysis of the specific context and the structural context shows that the boundaries and the nature are recognized at national level. At the EU level, they are less important. The EU is mainly focused on its renewable energy target. Furthermore, the analysis shows a difference between the specific context and the structural context. In the specific context, the guiding policy document is focused on wind farms, whereas the general national and EU renewable policies do not emphasize a specific renewable energy source. In the wider context, the public discussion also reflects concerns about the boundaries and the environment. However it is also apparent that none of the analysed documents recognize the functions of the place. The spatial misfit analysis showed that most functions partly fit with wind farm activities. This could explain why the analysed documents do not, or only poorly, include the functions. The spatial misfit is located in the specific context, and the guiding policy of the specific context emphasizes wind farms. It can be concluded that the spatial misfit mainly originates within the specific context which is closest to the actors, and is directly influenced by the actors' implementation process. The next section analyses the actors and their characteristics.

4.6.2 The actors

Ministry for Resources and Rural Affairs and the Resource Authority

The Ministry for Resources and Rural Affairs has the task of providing the policy on renewable energy sources, and then proposing and promoting the projects. The policy direction of the Ministry heavily depends on its Minister, George Pullicino, who has led the Ministry since 2003. The wind farms have a high priority but not at any cost. It is

also a priority to find private investors for the wind farm and to make the sites as attractive as possible. Hence the preliminary studies and the Environmental Impact Studies need to show that the site is suitable and that the wind farms are economically feasible. The Ministry is supported by the Resource Authority which falls under the Ministry and is responsible for monitoring and the regulation of generation, transmission and distribution of renewable energy. The authority is an important advisory actor and is authorized to formulate and implement renewable energy policy according to the policy direction given by the Minister (Gov, 2000a). Further, the Authority advises the Ministry over practical implementation matters, such as energy distribution and tariffs. It is also involved in wind data collection and monitoring of the process in cooperation with the University of Malta.

Enemalta

Enemalta Corporation is the state-owned, and only, energy provider on Malta. The Government reformed Enemalta, and entrusted the new Malta Resources Authority with regulation of the energy market, in 2001. Enemalta is authorized by the Enemalta Act Chapter 272 "to generate, purchase, transmit, transfer, distribute and supply electrical energy for domestic, commercial, industrial and all other purposes" (Gov, 1977). Untill a few years ago, Enemalta had no authority to determine energy prices; and its energy division struggled with financial losses. The company is bound by instructions from the Ministry. The Minister appoints the Enemalta board members and gives policy direction. Every non-subsidized investment in renewable technologies is a financial burden for Enemalta. Additionally, as the only current supplier of energy, any private investment in renewable energy is disadvantageous for Enemalta. It means a loss of clients and increasing competition. Nevertheless Enemalta is an important actor as it is responsible for energy distribution. The company got funding for the manufacture and supply of a high voltage submarine cable connecting Malta and Sicily, and this includes a distribution hub for the wind farm at Sikka l-Bajda. Enemalta closely cooperates with the Resource Authority over technical matters such as tariffs and the distribution of renewable energy. Additionally it has launched several renewable pilot projects and informs customers on renewable energy technology.

The Malta Environment and Planning Authority

The Malta Environment and Planning Authority is elaborated upon in Chapter 3. The function of the Authority in this case is controlling and coordination. The Authority has the task of reducing planning and implementation constraints as recognized by several renewable energy experts and the Mott McDonald report (Farrugia, et al., 2005; MMD, 2005b). In 2007, the Authority reviewed its Development Control Policy and Design Guidance in favor of renewable energy sources (MEPA, 2007). From the beginning of the process the Authority was present and coordinated the preliminary scooping process, as well as the implementation process. After receipt of the project prescription from the Ministry for Rural Affairs and the Environment, the Authority decided on the need for an Environmental Impact Assessment according to the Environment Impact Assessment Regulations, L.N. 114 of 2007. The Authority invites, informs and communicates with actors and stakeholders. An important task in the wind farm case is also seeking consensus between the ministries. From this perspective, the Authority has a mediating function. Although the Authority has the task to protect the environment, it

falls under the responsibility of the Office of the Prime Minister, depends financially on it, and has to follow government's strategic direction. The wind farms have an overriding public interest, and the probability that the wind farms will be built is high.

The Office of the Prime Minister
The Office of the Prime Minister as an actor has already been elaborated upon in Chapter 3. Considering the wind farm projects, the Prime Minister is personally involved in promoting the farms and giving them national importance. Internationally, and on the EU level, he has stressed the importance of renewable energy sources. Nationally, in the 2008 election campaign, the Prime Minister placed environment at the center of the political agenda.

Non-governmental Maltese actors of the implementation process
In both wind farm projects, the Maltese environmental organization BirdLife (introduced in Chapter 3) was involved in the scoping process and the subsequent environmental survey work. The Ministry for Resources and Rural Affairs and non-governmental consultancies consulted the organization on the methodology for the studies on birds and bats. Another important actor in the projects is the University of Malta. A wind farm expert from the University was entrusted and employed by the Ministry to advise and to work on technical details of the wind farm projects. He was the first person with a PhD in wind farming from Malta and became one of the guiding people in the project.

Stakeholders
Due to the scale of the wind farm projects, several governmental and non-governmental entities are concerned with the development of the wind farms. In the case of Sikka l-Bajda and Wied Rini, the Malta Communications Authority is concerned about the electromagnetic interference which could affect the broadcasting service. In the case of Wied Rini, the Department for Environmental Health is concerned about noise pollution and shadow flicker effects as well as fine dust developments during the construction stage and its effects on residents (MEPA, 2009b, 2009c). In both cases, the Environment and Planning Authority was obliged to inform the Local Councils. In both cases, the Mayors, on behalf of the residents, were concerned about the environmental, noise and visual impacts. Other stakeholders included environmental and heritage NGOs, opposition parties and economic investors. The environmental and heritage NGOs in general welcome renewable energy technology but have a strong environmental consciousness and do not want to build wind farms if they come at a high environmental cost. A similar point of view has been taken up by the opposition parties Patrit Labourista- the Labour Party and Alternativa Demokratika- the Green Party. With regard to economic investors, none of the Maltese renewable energy companies are economically able to construct the wind farms. The investment has to come from companies outside Malta. These companies need a stable political situation and clarity if the wind farms are economically, socially and ecologically feasible. Other stakeholders are the residents and the general public. Mainly in the Wied Rini case, the residents are concerned about the noise, vibration and visual effects of the wind farm. Further, the loss of agricultural land and property values is a major concern.

European-level actors
The European Commission is an actor in Malta's implementation process as it directly contacts the Ministry of Resources and Rural Affairs, seeking for implementation of Directives and the fulfillment the commitments made by Malta's government. The communication is channeled through the Permanent Representation of Malta in Brussels, which has a special land-transport and energy attaché. The Ministry frequently has to report on national renewable energy implementation, using indicators and comparative statistics. The permanent representation of Malta informs the Ministry of its needs and forwards the information to the European Commission. The strongest measure open to the European Commission to enforce implementation of its directives is to request the Court to impose a financial penalty.

4.6.3 The core characteristics of the key actors

The core characteristics, motivation, cognitions, and capacity of the key actors are analyzed using the Contextual Interaction Theory. As explained, this assumes that actors act and interact according to their characteristics.

Motivation
The motivation of the key actors is a decisive factor in policy implementation. For example personal goals and values, as well as policy goals, pressures and legal obligations, affect other characteristics as well as other actors and the personal performance of actors. Table 26 provides an initial overview of the major sources of motivation for actors and the subsequent sections elaborate the table.

Actors	Source of motivation
EU Commission	Common EU energy goals. Specific renewable energy goal 20% by 2020. EU law, directives, agreements, guidelines. International agreements. Malta's National renewable energy target. Malta's National Renewable Energy Action Plan.
Ministry for Resources and Rural Affairs Malta Resource Authority Enemalta	EU law, directives, agreements, guidelines. Prestige, leader in building the first offshore wind park in the Mediterranean. EU funding and technical support. Malta's National Renewable Energy Action Plan. National Law. International agreements. Personal carrier. Ministerial responsibility. Oil independency
Office of the Prime Minister Malta Environment and Planning Authority	EU law, directives, agreements, guidelines. Prestige, leader in building the first offshore wind park in the Mediterranean. International agreements. Stimulation of a green economy. Oil independency National law. Personal carrier. Power.
NGO Birdlife	Organization's statutes and goals. EU, National and International law. EU life programme. Personal attachment to the locality and place.

Table 26. Source of motivation of the key actors Sikka l-Bajda and Wied Rini case

Considering the motivation of the European Commission, energy security, which is the motor of economic development worldwide, was in fact one of the reasons for the launch of the European Union, starting with the signature of the Treaty of Paris and the formation of the European Coal and Steel Community in 1951. The availability of and the dependency on oil for transport and energy is a source of political instability. Furthermore, the use of fossil oil increases CO_2 emissions, a major factor in the greenhouse effect. The motivation of the European Commission in promoting renewable energy sources is rooted in the desire of the member states to be independent from the oil producing countries, and from political and oil market instabilities. Additionally, the EU is committed to reducing greenhouse gasses as envisaged in the United Nation's Kyoto Protocol and subsequent international greenhouse gas emission reduction commitments (EC, 2007, 2009c). Another motivation of the EU Commission to promote renewable energy sources in Malta is the renewable energy technology industry which contributes to the economic development of the European Union and has made the EU the world leader in the export of renewable technologies. Hence the promotion of the technology aims at consolidating of this status (EC, 2007).

The European Commission was highly motivated in setting an " … ambitious overall objective for renewables penetration …" as a tool to increase the share of renewable energy sources in the European Union (EC, 1997). Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources includes an indicative target of 12% of gross domestic energy consumption by 2010 for the EU, plus individual indicative targets for the member states (EC, 2001a) . The targets indicated by the Commission are based on the technological and economic potentials of the Member states, as well as announced targets from the member states and their current renewable energy policy. As such, the Commission indicated an individual and ambitious target for Malta during its accession negotiations. Malta's renewable target was 5% of its gross electricity consumption by 2010 (EC, 2003). However, the European Commission relies on the member states. Malta did not meet the target and strived for 0.31% by 2010. Already prior to 2010, the European Commission realized that the overall 12% target would not be met.

The failures to reach targets motivated the Commission to strengthen the legal framework and to enforce action by the member states. Through Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, Malta's government became obliged to prepare a National Action Plan and to set its own obligatory renewable energy source target for 2020. Malta's government agreed on a national target to generate 10% of its final energy consumption from renewable sources by 2020. The EU Commission in return committed itself to support local and regional development with regard to renewable energy through structural funding (EC, 2009c).

On the national level, one of the strongest motivations for the Malta Ministry for Resources and Rural Affairs and the Malta Resource Authority is the renewable energy target indicated by the European Commission in Directive 2001/77/EC. The authority launched a consultation process on the development of a strategy for the exploitation of renewable energy sources in 2002, one year before the membership referendum and when it was unclear if Malta would become an EU member state. The process aimed at the identification of Malta's renewable energy potentials and the development of a negotiation position towards the European Commission with regard to an indicative

renewable energy target. However, despite the strong motivation, Malta did not have the capacity to reach the target (detailed elaboration in the section on capacity and power) (MMD, 2005b). Another strong motivation was Directive 2009/28/EC which obliged Malta to set up a national strategy. This is Malta's only legally binding renewable strategy. The previous draft renewable energy policies were not approved. Malta also had to transpose the directives into national law, which directly binds the Ministry and the Authority. Accordingly, the Malta Resource Authority Act was changed and now includes the task of the Authority to " … promote, encourage and regulate the harnessing, generation and use of all forms of energy and encourage the use of alternative sources …" Article 4(2), (Gov, 2000a).

In addition to the EU and national law, Malta signed the Kyoto Protocol. However, this source of motivation is weak as Malta did not commit to reducing greenhouse gasses. Another source of motivation is funding from the European Commission. For instance, Enemalta received € 5 million in the scope of the Small Isolated Island Initiative through the European Energy Programme for Recovery for the construction of a new energy distribution center. The center is partly needed for the offshore wind farm at Sikka l-Bajda. Another form of support from the European Union is the platforms for knowledge exchange. European Energy Research established programmes such as Intelligent Energy, the Research Fund for Coal and Steel and Climate Action, which supports research in renewable energies. For example, the Malta Resource Authority participates in the project PV-NMS-NET, Supporting Development of Photovoltaics in the EU New Member States Network. The project is funded under Intelligent research and provides knowledge support for the preparation of the national Renewable Action Plan (PV-NMS-NET, 2009). Apart from the obligations and funding, personal carriers are a source of motivation. In the three entities, the Ministry, the Authority and Enemalta, new staff were recruited and educated for the implementation of the renewable energy policy.

For the Prime Minister, the wind farms are prestige objects as well. Malta could be the leader of wind farms in the Mediterranean Sea. This not only contributes to Malta's oil independency, it also shows Malta's willingness to support the reduction of greenhouse gases and to fulfill Malta's commitments towards the European Union. Furthermore, investment in the wind farms creates a new industry in Malta which contributes to the Government's policy of stimulating and supporting a green economy in Malta and the project Eco-Island Gozo. The Office of Prime Minister includes the Environment and Planning Authority. The Authority is mainly motivated by the development planning legislation which includes the promotion of renewable energy technology. The Authority takes into account the precaution principle with regard to the environmental and social impacts of the wind farm, such as the visual, noise and vibration impacts. Here, the zoning policy guides the Authority. Furthermore, the Authority has to follow the general national policy, which is another strong motivation.

Turning to the non-governmental actor Birdlife, its main motivation as project Manager of the EU LIFE Yelkouan Shearwater Project is its organizational goals and the goal of the European Union to protect endangered birds. To meet that objective, the organization received EU funding for the project at Rdum tal-Madonna. Moreover, the environmentalists feel personally responsible and motivated to protect endangered birds.

Cognitions

The actor characteristic 'cognitions' comprises an actor's information filtering processes, learning and to what extent an actor accepts new information. Table 27 displays the actors main foci of information, how actors communicate with each other and the quality of communication, as well as how actors understand the case problem. The wind farm policy implementation in Malta is strongly guided through "learning by doing" as no other Mediterranean country has yet built an offshore wind farm. The European Commission mainly communicates with the Ministry of Resources and Rural Affairs. The Commission emphasizes the implementation of the directive, the monitoring and the reporting of the process. As such the Commission depends on the information the Ministry provides. The communication is formal, mainly through official letters channeled through Malta's permanent presentation in Brussels. If the Ministry or the Commission needs some clarification they personally speak, or send mail, but agreements and decisions have to be written in official letters. The Commission is more interested in the results and the fulfillment of procedures, which needed to be in line with the EU law, than on the entire implementation process on the local level. This is regarded as Malta's own affair.

The Ministry of Resources and Rural Affairs is mainly focused on Malta's renewable energy target of 10%. This target is a challenge for Malta. However, the Ministry is conscious that Malta has the same obligations and rights as every member state in the EU. The wind farms are considered as vital in reaching the target. Moreover, the projects are prestigious and innovative as Sikka l-Bajda will be the first offshore wind farm in the Mediterranean. The Mott McDonald report identified Sikka l-Bajda as the best potential offshore site and as more economic than onshore wind farms. From the identified technically suitable sites for a land based wind farm, Wied Rini was identified as suitable with several constraints, such as the closeness to environmentally protected areas and residents (MMD, 2005b). The government is conscious about the constraints on the site but considers them as manageable.

The wind farm project's implementation process is strongly characterized as "learning by doing". At the beginning of the project, the Ministry searched for technically feasible renewable energy technologies, which would have no or minimal impact on the scarce land, such as floating and deep-water wind farms. However, due to economic reasons, the focus came onto the most technically and economically feasible technology. The Ministry authorized the Resource Authority to develop a renewable energy policy due to there being available experts in the Authority. The Authority assessed the potentials of deep-water offshore wind energy in 2006. Possible constraints, mainly with regard to air traffic and environmental protection, on land-based onshore wind farms were investigated together with stakeholders. Knowledge was exchanged between experts at meetings organized by the European commission (MRA, 2007). The Resource Authority participates in renewable energy research projects financed by the EU. The Ministry linked up with the University and employed Malta's first PhD qualified wind farm expert who became one of the technical leaders of the wind farm project. Regarding Enemalta, the company fully depends on the policy of the Ministry. The company is focused on the distribution of energy. The company is also focused on the construction of a new energy distribution centre, as well as the installation of smart meters, and consumer education and service.

	Focused information	Communication with other actors			Case problem understanding
		Method	**Actors**	**Quality**	
EU Commission	**I**nternational commitments (United Nations Framework Convention on Climate Change). **E**U 20% overall target. **M**alta Resource Authority and Ministerial reports.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact.	**M**inistry for Resources and Rural Affairs.	+	**M**ember states and Ministry are responsible for renewable energy implementation. **N**ational strategy should reflect the national needs and possibilities but must be in line with EU law.
Ministry for Resources and Rural Affairs **Malta Resource Authority** **Enemalta**	**E**U Renewable energy Directives. **N**ational renewable energy target of 10%. **M**ott McDonald report. **N**ational Development Planning Legislation. **E**U Bird and Habitat Directives. **E**nvironment Impact Assessment and requited studies. Electricity distribution, technical possibilities.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**R**esource Authority. **M**alta Planning and Environment Authority. **E**uropean Commission. **B**irdlife. **S**takeholders **M**inistry for Resources and Rural Affairs	+ + / + 0 +	**M**alta is a small country with a unusual high population density, resulting in no unused land. **V**ery limited renewable energy sources, sun, wind, waste. **S**ikka l- Baida and Wied Rini, the best possible areas for wind farms, according to available wind sources and manageable social and environment impacts. **W**ind farms are vital to reach the national target. **W**ind farms are prestigious and innovative, and the first offshore one in the Mediterranean area. **H**igh quality environmental and feasible studies are necessary to limit social, environmental and economic risks. **W**ind farm construction depends on development permission and on private investors.
Office of the Prime Minister	**E**U 20% overall target. **N**ational renewable energy target of 10%. **I**nternational commitments **D**evelopment of green economy. **O**il independency **I**mage of the Prime Minister and Malta as modern EU member state.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**E**uropean Commission. **M**inistry for Resources and Rural Affairs	+ +	**W**ind farm development a dilemma, obligation and opportunity. **W**ind farm stimulation for a green economy. **T**echnical and land constraints make development expensive for Malta.

Malta Environment and Planning Authority	**N**ational Development Planning Legislation. **E**U Bird and Habitat Directives. **E**nvironment Impact Assessment and required studies.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact.	**M**inistry for Resources and Rural Affairs. **R**esource Authority. **B**irdlife. **S**takeholders.	**+** + **+** 0	**W**ind farm industrial development. **P**ermitting according to Development and Planning legislation. **W**ind farm needs an Environment Impact Assessment. **P**recautionary principle is important. **P**ublic overriding interest is decisive.
NGO Birdlife	**E**nvironmental information. **N**egative effects of wind farm construction on birds. **O**wn local knowledge about area**.** **E**U Bird and Habitat Directives.	**P**rotest letters. **E**-mails. **P**ersonal contact. **M**edia.	**M**inistry for Resources and Rural Affairs. **R**esource Authority. **M**alta Planning and Environment Authority.	+ + +	**O**nly few small areas left for protected birds in Malta. **B**irds are already endangered, wind farms will worsen the living conditions for birds in Malta. **W**ind farms are generally welcomed but large-scale wind farms not essential to reach the renewable energy target.

+ Good communication, / Sufficient communication, 0 No information, - Bad communication according to the actor

Table 27. Cognitions of the key actors Sikka l-Bajda and Wied Rini case

The Office of the Prime Minister is involved through two actors, the Prime Minister and the Malta Environment and Planning Authority. The Prime Minister stresses the importance of the wind farm for Malta's oil independency and in reaching its national renewable target of 10%. However, the wind farm policy reflects a dilemma: the implementation of the land-based wind farm is economically and technically feasible but has environmental and social constraints. The construction of an offshore deep-water wind farm is not economically and technically feasible for Malta. The non-construction of the wind farms would mean a failure to meet the national target. Hence the Sikka l-Baijda and Wied Rini forms a compromise. After the accession of Malta to the EU, the Prime Minister was focused on a deep-water offshore wind farm and innovative floating wind turbine technologies. However, over time and with more detailed studies assessing wind farms in Malta, the Prime Minister modified the ambitious plan. The two (three including Hal Far) wind farms became the national priority. Turning to the Malta Environment and Planning Authority, the Authority is focused on the environmental and planning legislation. It required, from the Ministry, several studies which clearly showed the environmental and social impacts as well as a full Environmental Impact Assessment. For the Authority, the national and European Environment laws are important. Nevertheless, as part of the Office of the Prime Minister, the Authority also has to take into account national priorities.

Considering the cognitions of Birdlife, the organization is focused on the protection of birds and their habitat. The organization acts and negotiates according to the precautionary principle. Although there are no wind farms in Malta, so no experiences with birds and wind farms, the organization follows the position of Birdlife International (Birdlife, 2005).

Communication between the actors is conceived by the actors as good and as sufficient. The Ministry and the Resource Authority need close collaboration with the Environment and Planning Authority because of its local, environmental and spatial knowledge. Further, these three actors need the local and expert knowledge of Birdlife. The actors contact each other by e-mail, telephone and letter according to the need. The media are mainly used to provide general information about the situation to the wider public. The actors welcome wind farms in general and agree on the precautionary principle. This de-emotionalizes the communications between the actors. However, especially in the Resource Authority, several people are involved with the renewable energy policy and the various technical aspects, such as energy distribution, tariffs and wind farms, which slightly hampers communication with other actors.

Capacity and power

Power refers to the capacity of the actors in the implementation process to implement the policy, and this also includes the capability to hamper or to change the process. In general, capacity is understood as the ability to forward specific or own purposes. Access to and availability of resources stabilize the power and capacities of actors. Resources include money, technologies, renewable energy resources and land. Fear, trust and legitimacy are also sources of capacity and power. As explained in the theoretical chapter of this thesis, actors can attribute power to an actor, providing them resources and giving the other actors the capabilities to act. Conversely actors can exercise power to guide or to force other actors towards their own objectives. Table 28

shows the relevant actors, the cases where they exercised and attributed their power, as well as the most important resources.

At the European level, the Commission developed the renewable policy and a legislative framework to implement the policy. The indicative target was not sufficiently powerful to stimulate Malta's government to take effective measures and launch a renewable energy policy. The subsequent directive forced Malta's government to approve and submit a national action plan. The wind farms are an essential part of the plan. The renewable energy policy of the European Commission also stimulated Malta to end its isolated energy market and connect Malta to Italy. Furthermore, European knowledge exchange is vital for Malta's Ministry and Authority to educate itself and its staff, and to come in contact with experts and possible investors. For Birdlife, the European Commission is mainly important as a co-financier and legitimizer of its bird protection project. Without this European legitimacy and funding, Birdlife would not have been that powerful an actor in the wind farm implementation process.

On the national and local levels, national and local actors point to Malta's high population density, including the large number of tourists in the summer months, and the limited space as the main challenges in implementing renewable energy technologies. The Ministry for Resources and Rural Affairs has the legal authority to develop and to define the renewable energy policy. However, the Ministry does not have the required resources in the forms of knowledge, experience and staff. Therefore, the Ministry assigned this task to the Authority. Additionally, the Ministry employed experts from the University. Nevertheless, the Ministry is a deciding actor. For example, none of the renewable energy policies proposed by the Authority had been approved. The Ministry also coordinates the three wind farm projects and contacts with the other actors. The Authority had to rearrange and employ staff to be able to develop a policy and to fulfill the new requirements of the European Commission and the Ministry. Due to its expertise and knowledge, the Authority, although it cannot decide on crucial measures, is given "good weight" by the Ministry. Enemalta is, compared to the Authority and Ministry, a powerless actor as it cannot decide its own policy. Nevertheless, the company is vital in the distribution of energy. The Ministry and Authority depend on the cooperation of Enemalta staff due to their practical knowledge. Enemalta does not have the financial resources and expertise to develop and invest in large wind farm projects, and nor have other Maltese renewable energy companies.

The Office of the Prime Minister is a very powerful actor. The Prime Minister gives legitimacy to the wind farm project along with national importance. This political leadership is important in mobilizing and binding the actors. However, the most powerful actor in this case is the Environment and Planning Authority which is part of the Prime Minister's office. The Authority decides which assessments are necessary for giving development permission. Development permission is needed to demonstrate and guarantee, to private investors from outside Malta, the political and legal support. The government depends on foreign private investment but Malta's energy market is small compared to other European energy markets, which make Malta's market less attractive for investors. Apart from limiting the risk for foreign investors, the planning permission gives legitimacy to a project. The other actors await the studies and the decisions of the Environment and Planning Authority, and trust the Authority. The trust in the implementation process and governmental actors depends on the transparency and decisions of the Authority. Although final permission remains unclear, the Ministry,

	Exercised power	**Attributed power**	**Resources**
EU Commission	**D**evelopment and decision making on renewable energy policy. Indication of renewable energy target. **D**emand of National Action Plan. **D**ecision co-financing Enemalta's new energy distribution center. **D**evelopment and decision on Environment LIFE Programme. **P**rotection of certain habitats and bird species.	**M**inistry carries out renewable energy policy. **M**inistry submitted National Action Plan and reports on the implementation process. **M**inistry publishes key documents. **M**inistry makes Environment Impact Assessments. **P**lanning and Environment Authority publishes and makes Environmental Impact Assessments accessible. **M**inistry and Authority participate in knowledge exchange programs. **M**alta's governmental actors follow the rule. **B**irdlife carries out the LIFE programme.	**E**U policy. **E**U law. **L**egitimacy. **F**unding. **T**echnical knowledge. **C**lose contact to the Prime Minister and the Ministry for Resources and Rural Affairs.
Ministry for Resources and Rural Affairs	**D**ecides and develops renewable energy projects and priorities. **P**roject coordination. **O**rders preliminary project studies and studies for the Environmental Impact Assessment. **G**uides the Resource Authority. **E**mployment and dismissal of staff.	**R**esource Authority develops and proposes policy. **P**artly carries out studies for the Environment Impact Assessment. **C**losely involve the Authority in project development. **A**waits decision of the Environment and Planning Authority.	**N**ational Law. **N**ational Renewable Action Plan. **L**egitimacy. **J**obs. **T**echnical knowledge. **C**lose contact to the European Commission, Prime Minister and other Ministers.
Malta Resource Authority	**R**enewable policy development, project development. **P**artly carries out studies for the Environment Impact Assessment. **E**mployment and dismissal of staff. **A**dvises the Ministry on renewable policy.	**C**arries out ministerial decisions.	**N**ational Law. **L**egitimacy. **J**obs. **T**echnical knowledge. **C**lose contact to the Minister.
Enemalta	**D**istribution of energy. **C**ustomer Service and education.	**C**arries out ministerial decisions.	**D**istribution facilities. **T**echnical knowledge. **C**lose contact with the Minister and the Authority.

Office of the Prime Minister	**P**rioritize wind farms. **A**ppoints and dismiss Ministers. **R**organises authorities.	**M**inistries follow national policy direction and carries out national policy. .	**N**ational Law. **H**ighest hierarchical position in the governance structure. **L**egitimacy. **F**inances. **C**lose contact with the Ministries, Authorities and EU Commission.
Malta Environment and Planning Authority	**P**rovides development permissions. **D**emanding several environment, technical, social assessments. **D**emanding an Environmental Impact Assessment. **A**dvises the Ministry on planning and environmental aspects.	The actors await development permission.	**E**nvironment Impact Assessment. **P**lanning and Development Act. **P**lanning and environmental knowledge. **J**obs. **C**lose contact with the Ministries and Authorities.
NGO Birdlife	**I**mplementation of EU LIFE policy**.** **I**nvestigation and reporting of environmental damages. **A**dvises the Ministry and the Authority.	**T**rust the Ministry and Environment Planning Authority. **A**waits the result of the assessments and the development permission.	**E**U Law. **N**ational law. **C**lose contact with the EU and International. Birdlife **L**egitimacy. **L**ocal expert knowledge. **F**inances.

Table 28. Capacity and Power of key actors Sikka l-Bajda and Wied Rini case

together with the Authority and Enemalta, decided to build the energy distribution infrastructure for the offshore wind farm at Sikka l-Bajda. This shows that related projects can be planned and started without waiting for permission from the Environment and Planning Authority. In addition the Prime Minister nationally emphasizes the importance of the wind farms. The wind farms are a vital part of the National Action Plan. This increases the pressure on the Environment and Planning Authority to allow the wind farms due to their overriding public interest.

Birdlife was contacted by the Ministry and the Authority to assess the impacts of the wind farm on the protected Natura 2000 project. Birdlife shared their expertise and recommended a study period of at least two years. Even though the Ministry has not fully followed the recommendations with regard to the construction of a monitoring mast, it has followed the advice with regard to wind farm assessment. This indicates that the government needs legitimation from Birdlife and its expertise.

Summary

This analysis of the actors shows that the European Commission created renewable energy targets and a subsequent obligation for Malta to submit a renewable action plan, including a mandatory target, and that this is one of the main motivations for the governmental actors to implement the proposed wind farms. The target creates a timeframe and a form of pressure for the government to act. However, the implementation of the renewable energy policy and the focus the wind farms are largely guided by Malta's available financial resources and technical knowledge, as well as prestige. The Prime Minister guides the process by showing leadership, confirming the target and emphasizing the importance of the wind farms both nationally and internationally. The Ministry for Resources and Rural affairs is responsible for creating a renewable policy and for implementing the wind farm project. However, especially at the beginning, the Ministry did not have the resources, that is the knowledge and staff, required and so authorized the Resource Authority. The Authority also needed additional knowledge and staff to fulfill the new task. The Ministry had to link up with the University and with international knowledge exchange programmes. Despite the technical and economic feasibility of the wind farms, as well as the political leadership and positive attitudes of the actors, the practical implementation of the wind farms is still difficult because of Malta's zoning and conservation policy and the European environmental policy. The Environment and Planning Authority has finally to decide if the public interest is so high that the European and national institutional boundaries can be overruled.

4.7 Origins of the spatial misfits

Section 4.6 investigated the characteristics of the actors and examined how they influenced the implementation process in order to identify the origins of the spatial misfits. Given that no factors evoked the spatial misfits, Table 29 shows the key factors, the actors, the actors characteristics for each governance level.

Level	**Actor**	**Factor**	**Actors characteristics**
EU	EU Commission	Focus on the renewable target of 20% EU law. Time frame, deadline 2020. Legitimacy	Cognitions. Capacity and Power. Motivation. Capacity and Power.
National	Ministry for Resources and Rural Affairs	Focus on large-scale wind farming. Most large "empty" areas in Malta are protected. Lack of land. Environmental protection constraints but wind farms have an overriding public interest. National renewable energy target of 10% Lack of experiences, technical knowledge.	Cognitions. Capacity and Power. Cognitions. Motivation. Capacity and Power.
	Office of the Prime Minister	Focus on large-scale wind farming. Oil independency. National renewable energy target of 10%. Strong leadership in the implementation of wind farming. Lack of experiences, technical knowledge.	Cognitions. Motivation. Motivation. Capacity and Power. Capacity and Power

Table 29. Spatial misfit origins Sikka l-Bajda and Wied Rini case

From investigating the factors that cause a spatial misfit, it is clear that Malta has a lack of land to build large-scale wind farms. Malta has no "empty" land. The only large areas which are not built up, are not urbanized because of the strict development planning legislation. The zoning policy protects the rare natural and agricultural areas and balances Malta's urbanization process and nature. Additionally, the available offshore wind farm technology further limits Malta's possibilities to build a large wind farm (capacity and power). Nevertheless, the Prime Minister and the Ministry for Resources and Rural Affairs are focused on large-scale projects (cognitions). The main reason for the interest is that wind farm technology is more cost-effective than solar technology. Moreover, a wind farm would be even cheaper than the existing fuel electricity plants (motivation) (MMD, 2005a). Another reason is the committed target submitted to the European Union which creates a tight time framework. The government will not or cannot wait until culture and behavior change or that private investment in solar technology increases. Also, the lack of time and knowledge does not allow Malta to develop or adapt wind technology to its circumstances (capacity and power).

Hence, with the construction of a wind farm, Malta could solve two problems. First, Malta would reduce its national oil dependency and second, it could meet the European renewable energy target (motivation and cognitions). The government, the Ministry, Enemalta and the Environment and Planning Authority have already agreed to build parts of the offshore wind farm distribution network, co-financed by the European Commission. This shows that, despite the power sharing, the governance structure is still hierarchical (power and capacities). Much power is also attributed to the Environment and Planning Authority. Although the actors await the Environmental Impact Assessment and development permission, the focus of the Prime Minister and

the Ministry already indicate that the wind farms have a high overriding public interest which will probably allow development in a protected area.

4.8 Summary and conclusions

This chapter has investigated the renewable energy policy in Malta and the policy to implement two large-scale wind farms at Sikka l-Bajda and at Wied Rini. Two research questions guided the analysis: *to what extent does the wind park policy spatially misfit with the place of implementation, and where do spatial misfits originate*?

The analysis showed that the wind farms do not spatially misfit with all the characteristics of the place but mainly with the institutional boundaries and with nature. The institutional boundaries created environmental and agricultural protection areas. Due to Malta's size and population density, the loss of agricultural and natural habitat can hardly be compensated. The wind farms spatially misfit with the natural functions of the area and with naturalistic and humanistic values. Furthermore, the wind farms, including the offshore wind farm, are relatively close to residential areas. Especially in rural areas, as in the case of Wied Rini, the wind turbine noise is potentially disturbing. The noise spreads beyond the place boundaries of the wind farm area. The wind farms therefore spatially misfit with the function of adjoining places as living areas.

With regard to the origin of the spatial misfits, the misfit is rooted in the lack of appropriate locations that fulfill the technical and spatial requirements of fixed monopole wind farms of the proposed size. From that point of view, Malta does not have the land capacity to build a wind farm without losing protected natural areas or valuable farm land. Additionally, due to time pressure and Malta's limited technical knowledge on wind farms, Malta does not have the capacity to develop or to fit in wind technology on a large scale and has to depend on knowledge and investors from outside. Hence the spatial misfit of the large-scale wind farms cannot be solved without changing the technology and the policy focus. Currently, economic efficiency is guiding the policy, rather than local environmental aspects. The wind farms have a high symbolic value in terms of sustainable development and nature protection. They also contribute to the overall environmental quality. As such, the spatial misfit is recognized but considered as manageable by governmental actors. However, the wind farms are not yet implemented. The implementation process for the wind parks in Malta is still in progress. For instance, the Environment and Planning Authority is currently reviewing a Project Description Statement for a floating wind farm. The wind farm would be located around 21 km offshore and would have a total capacity of 54 MW (MPDC, 2011). The project would not be close to either residential or natural protected areas. So, the expectations of spatial misfits are lower compared to the other proposed wind farms. However, this project has just started and is beyond the scope of this study.

Chapter 5

Aquaculture Policy in Malta[3]

5.1 Introduction

Malta's aquaculture policy is part of the European Commission's common fisheries policy since Malta's accession to the European Union in 2004. By aquaculture, the EU means "… the rearing or culture of aquatic organisms using techniques designed to increase the production of the organisms in question beyond the natural capacity of the environment; the organisms remain the property of a natural or legal person throughout the rearing or culture stage, up to and including harvesting" (EC, 2002b). The European sustainable aquaculture policy aims to support the development of a dynamic aquaculture sector in the European Union. As such, the European Commission developed a strategy for the sustainable development of European Aquaculture, as well as enacting regulations concerning the use of alien and locally absent species in aquaculture, and for organic aquaculture production (EC, 2002b, 2009b, 2011a). Further, the European Fisheries Fund financially supports environmentally friendly production methods, aquaculture processing and marketing measures in member states.

Malta's aquaculture industry consists of six operators and ten active farms (Figure 15). Five of the six specialize in tuna farming which is often not recognized as an aquaculture activity because the farmed tuna are taken from the wild stock and then fattened. In this chapter, tuna farming is understood as an aquaculture activity following the European and Maltese definitions. In Malta an aquaculture establishment is "… any area, enclosure, impoundment, premises or structure set up or used on land or in water for the cultivation of marine or freshwater fish and includes any cultivated oyster or other shellfish bed or raft or other structure used for the cultivation of oysters and other shellfish"(Gov, 2001a).

Most of Malta's aquaculture farms are close to the shore and this causes social and ecological problems. The tuna ranching has significantly damaged the sensitive marine environment close to the coast, especially the internationally protected sea grass meadows. Furthermore, the smell of the tuna ranching, the processing of fish, the remains of bait fish and tuna waste have an adverse impact on other costal uses such as tourism. Malta's three key aquaculture objectives are to provide more space for further investment in aquaculture, to reduce conflicts with stakeholders, and to reduce the impact of aquaculture on the ecosystem (MRRA, 2007b).

[3] A preliminary version was published before as: Kotzebue, J. R., & Bressers, H. T. A. (2010). Biodiversity and aquaculture policy in the European Union: Spatial misfits in Malta's multilevel policy implementation process. *International Journal of Environmental Consumerism*, 6(11-12), 17-27.

Figure 14. Individual aquaculture farms in Malta
(Source: FAO Country sector fact sheet)

The development of aquaculture zones in the south-east and in the north of Malta became national priorities with regard to the three aquaculture objectives. The Ministry for Resources and Rural Affairs applied to the Planning and Environment Authority for the development of the southern aquaculture zone in 2003. The aquaculture zone is six kilometers offshore (Fig. 14), and provides space for around four farms, depending on their size, or maximum of 9000 tons of bluefin tuna. The development of the project was approved by the Malta Environment and Planning Authority at the end of 2005 (MEPA, 2005a). In the same year, the Ministry first publicly expressed plans to develop a second zone to the north of Malta. However, the assessment of the northern zone did not start before 2009. To date, the Ministry has merely relocated two farms to the southern zone and has not applied for development permission for the northern zone to the Environment and Planning Authority.

Considering the several functions and users of the coast, the permeable boundaries of aquaculture farms, the high marine biodiversity and nature as well as the values that people bestow on the coast, the is question is: *to what extent do the aquaculture zone spatially misfit with the place of implementation?*

In the event of a spatial misfit, the implementing policies can be incongruent with the boundaries, the important functions and the nature, as well as with the cultural and other values of a place. These spatial misfits, with any or all of these characteristics,

make measures inappropriate and/or inapplicable. The spatial conditions as well as the spatial misfit are parts of the specific problem context that influence the actors and the implementation process. Hence it is also crucial in explaining of the implementation process to know where potential spatial misfits are originated. Therefore, a second question is: *to what extent do the spatial misfits originate from the common EU aquaculture policies or from Malta's national multi-actor interaction implementation process?* This question is relevant because its answer directs attention in the improvement of future aquaculture policies either towards a greater sensitivity in EU policies for spatial differentiation, or towards a better guidance of national, regional and local implementation processes.

Since accession to the EU, Malta's aquaculture policy has to be in line with the European common aquaculture and related policies. Another aspect is that the aquaculture zoning policy in Malta is very contested by the Marsascala Local Council, representing local residents, small business owner and fishermen, as well as by the majority of the aquaculture operators. Three of the five aquaculture operators refused to relocate farms. The Marsascala Local Council, supported by aquaculture operators, appealed against the development permission granted by the Environment and Planning Authority. In January 2009, the development permission was quashed in court, to an extent because of a lack of clarity regarding the zone location. At the end of the same year, the Ministry for Resources and Rural Affairs applied again to develop an aquaculture zone in the south.

The chapter starts with an outline of Malta's aquaculture policy both before and after accession to the European Union (Sections 5.2 and 5.3). This is part of the wider context according to Contextual Interaction Theory, as explained in Chapter 2. Sections 5.4 and 5.5 consider the south-east aquaculture zone project, the characteristics of the place where the project is implemented, and identifies potential spatial misfits. Subsequently, Section 5.6 investigates the origins of the spatial misfits. First, the three contextual layers, the specific, the structural, and the wider context, which all influence the actors, will be analysed. Following this, the key actors in the process and the interaction process itself will be investigated. Section 5.7 is the concluding paragraph.

5.2 Malta's aquaculture policy before EU accession

Aquaculture in Malta started as a scientific programme with the foundation of the National Aquaculture Centre by the former Ministry for Food, Agriculture and Fisheries in 1988. The aim was to develop aquaculture as an industrial activity and to make Malta a fish exporting country (MinRAE, 2003; Schiavone, 1988). The climate conditions and the water temperatures are favourable for aquaculture. However, the sea bream and sea bass production envisaged at that time needed sheltered areas. Consequently, the farms were located approximate 300m from the shore in 12m deep water. Research projects and monitoring showed that the farms had an adverse impact on the marine ecosystem (IAUS, 1992). Further, the aquaculture industry competed with the tourist industry in the coastal areas. The government therefore wanted to control the development of the aquaculture industry from the beginning.

In 1990, the government enacted aquaculture regulations which regulated the licensing, location and monitoring of aquaculture farms. The law demanded an

Environment Impact Assessment from the aquaculture developer. Malta also followed the European Environmental Impact Assessment Directive from 1985 onwards despite not being a member State. The first private commercial aquaculture farm started with sea bream and sea bass production in 1991. Over the first two years, the production increased tenfold and more private investors wanted to invest in this new industry (Agius, 1999). In 1992, the Structure Plan, Malta's central development planning, included several regulations with regard to aquaculture development. The government wanted to encourage marine-based aquaculture but avoid significant visual impacts and a too close location to the coast (MEPA, 1992). Additionally, the Malta Planning and Environment Authority enacted the 'Policy and Design Guidance Fishfarming' in 1994, which regulated the design, monitoring and reporting of environmental impacts.

Connected Directly to Fisheries and Aquaculture	
Number	**Title**
Chapter 425	Fisheries Conservation & Management Act
Chapter 146	Agriculture and Fishing Industries (Financial Assistance) Act
Subsidary Legislation 138.03	Slipway (Use) Regulations
Subsidary Legislation 10.30	Berthing Regulations
Subsidary Legislation 138.04	Registration of Fishing Vessels Regulations
Subsidary Legislation 138.06	Marine Vegetation Licence Regulations
Subsidary Legislation 36.34	Aquaculture Regulations
Subsidary Legislation 231.12	Sale of Fish Regulations
Subsidary Legislation 231.43	Fish Packing and Processing Establishment Regulations
Subsidary Legislation 36.26	Prohibition of Sale of Sea-Food Regulations
Subsidary Legislation 35.01	Fees Leviable by Government Departments Regulations (Sections 5b & Ministry for Agriculture & Fisheries - Fisheries section)
Subsidary Legislation 35.10	Fees for Abattoir and Veterinary Services Regulations (Section II)
Subsidary Legislation 117.12	Price Control of Fish Regulations
Subsidary Legislation 35.13	Fees Levied at Agricultural Produce Marketing Centres Regulations
Subsidary Legislation 138.05	Fisheries Officers (Remunaration) Regulations
Other legislation of importance to fisheries and aquaculture	
Chapter 348	Environment Protection Act
Chapter 226	Territorial Waters and Contigious Zone Act
Chapter 194	Continental Shelf Act
Chapter 356	Development Planning Act
Chapter 234	Merchant Shipping Act
Chapter 271	Marine Pollution (Prevention and Control) Act
Subsidary Legislation 231.32	Residues in Meat Regulations
Subsidary Legislation 231.34	Maximum Residue Limits in Veterinary Medicinal Products Regulations
Chapter 10	Code of Police Laws (Section 130)
Subsidary Legislation 128.01	Police Licenses Regulations (Section 15)

Table 30. Aquaculture and related legislation
(Source: Fish and Farming Regulation and Control Division)

The European Union had no common aquaculture policy at that time. Instead, European aquaculture producers that were members of in the Federation of European Aquaculture Producers committed to a code of conduct at the end of the 1990s.

At the beginning of the 21th century, the investments in Malta's aquaculture industry shifted from inshore sea bream and sea bass production to further offshore bluefin tuna farming in response to market prices and the domestic aquaculture policy. Currently almost 90 percent of the aquaculture production is bluefin tuna. In 2001, the Environment and Planning Authority published the Coastal Strategy Topic Paper. This report is part of the Structure Plan review and identifies aquaculture activity as a cause of the sea-grass meadow decline. The strategy recommends moving the farms further offshore to a designated area (the aquaculture zone idea) (MEPA, 2002). Furthermore, the Authority amended the 1994 guidance in 2002, recommending not to permit any farming in less than 50 m water depths, and to more strictly enforce the monitoring and reporting of farms. Over this period, Malta's government created a strict legal framework for regulating the aquaculture industry (Table 30).

On the European level, the Commission and the Parliament agreed a Strategy for the Sustainable Development of European Aquaculture in 2002. The strategy aimed to create long-term employment in the aquaculture industry, assure consumer safety and good quality as well as a high standard of animal health and welfare, and environmental protection (EC, 2002b). The integration of the aquaculture industry in the European common fishery policy is linked to reforming the policy and stricter fish stock protection.

5.3 Malta's aquaculture policy after EU accession

Upon EU accession in 2004, Malta had to improve the monitoring and reporting of water quality and fish production. Before accession, aquaculture operators only monitored the water quality in general terms. After accession, operators became obliged to monitor the sediment quality, benthic quality and the habitat at the cage sites. Several European Directives, such as the Water Framework Directive, the Dangerous Substances Directive and the Habitat Directive, directly influence the aquaculture industry. For instance, some aquaculture farms were located within candidate sites for marine conservation areas and close to protected bird breeding areas. With EU accession, Malta became obliged to safeguard the food reserves for wild birds in line with to the Bird Directive.

In the year that Malta acceded, Malta's former foreign Minister became the European Union's Commissioner for Fisheries and Maritime Affairs for the period until 2010. The Commissioner strengthened the position of aquaculture in the Common Fishery Policy. Under his presidency, the Council of the European Union included aquaculture products in the regulations on organic production and labeling of organic products in 2007. Subsequently, in 2009, the Commission and the Parliament agreed on a new impetus for the EU's sustainable development aquaculture strategy. To achieve a leading role in the aquaculture industry, the strategy demands European support for research and aquaculture technologies (EC, 2009a). In the same year, the European Council agreed on a new regulation laying down detailed rules on organic aquaculture animal and seaweed production, so amending the 2007 regulation. The Commissioner

demonstrated his strong position in favour of the aquaculture industry when he, together with Malta's Minister for Resources and Rural Affairs and other heads of the EU Mediterranean member states, successfully opposed the ban on the sale of bluefin tuna in 2010. This decision safeguarded Malta's aquaculture industry which mainly exports bluefin tuna.

In 2007, Malta submitted its 'National Strategic Plan For Fisheries 2007-2013' to the European Commission. The plan outlines how Malta wants to use the European Fishery Fund, and includes the objective of increasing aquaculture production (Gov, 2007). Further, the Ministry for Resources and Rural Affairs has proposed several Aquaculture Operations Regulations, for example to strengthen environmental monitoring and to report the inputs and outputs of fish stocks (MRRA, 2008, 2011). The Ministry also intended to establish a strategic plan for the sustainable growth of the aquaculture industry in 2010. However, neither the tightening up of the aquaculture operations regulations, nor the strategy, has yet not been adopted.

5.4 The implementation of the aquaculture zone

The Ministry for Resources and Rural Affairs started the implementation process for an aquaculture zone by submitting a project prescription to the Environment and Planning Authority in 2003. The objective of the zone is to create new space for bluefin tuna farms and to replace farms which are close to the coast. The Ministry intended to use the vacated tuna sites for other finfish species (MRRA, 2007b). The proposed aquaculture zone is located 6km off Zonqor Point in Marsascala, to the south east of Malta (Figure 15). The area is approximately 3km by 3km and creates space for maximal four bluefin tuna operations with approximate 1200 tons of biomass each (MRRA, 2004). The location of the area has been chosen on Ministerial level as best site because of its closeness to the harbour, the bathymetry (the measurement of the depths of the sea), the wind and the currents. No aquaculture operator participated in this decision making process. According to the description of the Ministry, the bottom of the location is a sandy with some sparse merle beds. The area is no special site for fishing and some parts of the area are used as bunkering area.

The Environment and Planning Authority gave a permit for the aquaculture zone at the end of 2005. The permission explicitly allows the farming of bluefin tuna for an period of five years. The permission is linked to legal requirements, e.g. operators are obliged to monitor and report sediment parameters, benthic assemblages, biotic assemblages and basic water quality parameters. The reasons given for granting permission was that the Environment and Planning Authority regarded it as proven that the zone and the fish farming activities would have no or insignificant adverse impacts on the water quality, the habitat (habitat loss and disturbance of species), tourism and local recreation (MEPA, 2005a). A prerequisite for ensuring the insignificant impact is strict monitoring of the farms, the use of the newest feeding techniques, the collection of sinking baitfish, waste management and the prohibition of offal disposal into the sea, as well as a prohibition on the use of feed supplements. Two farms located into the area.

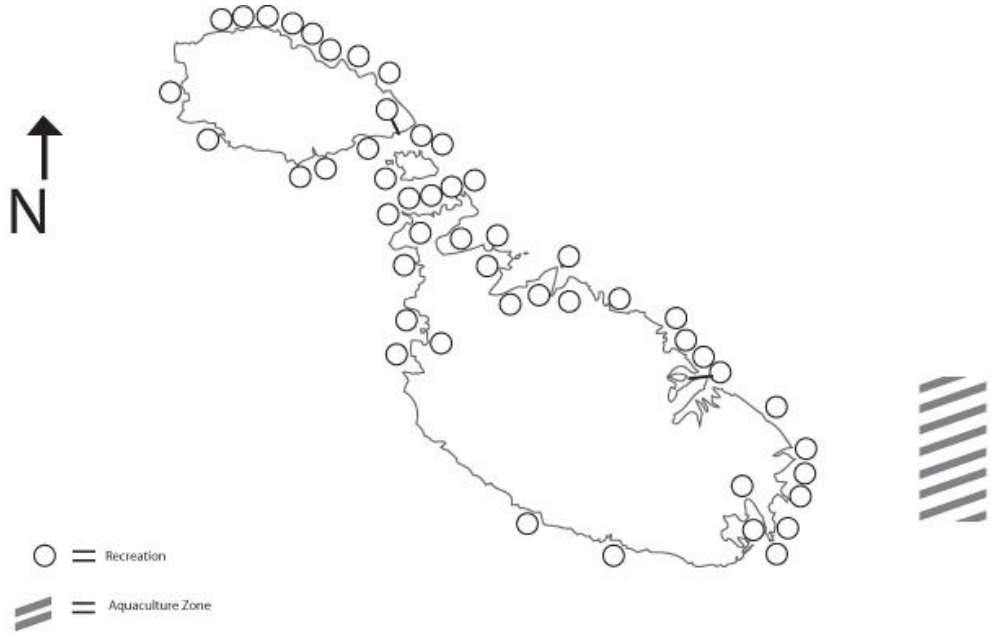

Figure 15. Proposed aquaculture zone in the south east of Malta

In January 2006, the Marsascala Local Council, the Marsascala Shop Owners' Association and the Chamber of Small and Medium Enterprises, supported by the majority of the aquaculture operators, appealed against the development permission. Other stakeholders, such as the Marsaxlokk local council and fish farm experts also contested the legitimacy of the decision. The Malta Aquaculture Producers Association commissioned an alternative environmental impact evaluation, which refuted the findings of the Environment Impact Statement that the aquaculture zone has no or an insignificant impact on the environment. Large parts of the seabed are covered by Maerl beds which have high species diversity and are highly sensitive. Further, the habitat directive protected urchin Centrostephanus Longispinus is found in the area. Another aspect was that the Ministry's development application included no clear technical plan. Hence, the consultants producing the Environment Impact Statement partly based their conclusions on personal communications with the Ministry for Resources and Rural Affairs and the Fish and Farming Regulation and Control Division (Scicluna & Aguis, 2006).

Stakeholders, including the Marsascala Shop Owners' Association and the Chamber of Small and Medium Enterprise, represented by the Marsascala Local Council, fear an adverse impact of the aquaculture zone on their businesses, and on the environmental quality. Personal experiences, confirmed by reports by the Environment and Planning Authority, showed that the monitoring and assessments of aquaculture farms are not carried out according to the law, and that farms have no or poor waste management. For instance, fish offal was found on a beach after harvesting farms (MEPA, 2002). The operators have also failed to be fully transparent about the input and output of stocks. Malta's operators were accused by international non-governmental organizations including Greenpeace International and World Wildlife Fund of using unregistered vessels for harvesting farms and transporting tuna (Vassallo, 2008a). Another infringement is that farms are registered at different sites than those declared

by operators (Vassallo, 2008c). These infringements have led to a bad reputation for tuna farming in Malta.

At the beginning of 2009, a court quashed the development permission. All applications and the names of the applicants must be published in the local newspaper and advertised by a notice on the site, according to Article 32(4) of the Development Planning Act (Gov, 1992). However, in this case, the Environment and Planning Authority affixed the site notice in the wrong location, which created uncertainty over the location of the aquaculture zone. The Ministry re-applied to develop the aquaculture zone in October 2009. Already in the beginning of the new application procedure, stakeholders were complaining that the Environment and Planning Authority had failed to clearly publish the development notice in the newspaper, and so that the Authority had to publish it twice. The development application documents are still not accessible on the Authority website. The decision by the Authority is still pending even though the reason for quashing the first development application was an irregularity in the procedure.

5.4.1 The place characteristics of the aquaculture zone

The characteristic of a place are its boundaries, functions, nature and values; in this case the site where the aquaculture zone is located. The characteristics express the relationship of institutional and geographical boundaries, socially and naturally determined functions as well as the values that people bestow upon the area. The aquaculture zone policy does not only influence the place, in that the existing characteristics of the place also influence the policy implementation as explained in Chapter 2. In order to identify a spatial misfit, the characteristics of the place will first be outlined. Subsequently, in Section 5.4.2, we will identify and analyse the possible spatial misfits.

The boundaries

With regard to its physical boundaries, the area, before being designated as an aquaculture zone, had only few physical and institutional boundaries. The only physical boundaries are created through the sea bottom. The site has a slight southward slope and a depth of approximately 55 to 103 meters (MEPA, 2005a; MRRA, 2004). Water has no fixed physical boundaries. Sea currents transport organisms on a large scale that exceeds the institutional boundaries of the aquaculture zone. Close to the site is a Maritime Traffic Waiting Area and a bunkering area supplying ships with fuel. The anchoring ships creates physical boundaries for the adjoining aquaculture zone. With regard to the institutional boundaries, the International Convention on the Continental Shelf demarcates the continental shelf, and the United Nations Convention on the Law of the Sea, as well as Malta's Territorial Water and Contiguous Zone Act, determines the limits of the territorial sea. From a legal point of view, Malta's sovereignty, and therefore the right to use and to manage the coastal zone, is limited to its territorial waters. The area is under the responsibility of Transport Malta, the authority for all modes of transport in Malta, and the Environment and Planning Authority which falls under the Office of the Prime Minister.

The functions
The designated aquaculture zone area has no particular social functions but a natural function as a habitat. Parts of the sea bottom are Maerl beds. Maerl beds are sensitive natural habitats as will be outlined in the next section. Furthermore, the area neighbours a marine traffic waiting area, with a shipping lane close to the designated aquaculture zone. Also close to the site is an fish abundant area, known as is-Sikka tan-Nofs, which is a breeding ground for fish and a traditional fishing area for small fishermen and recreational anglers.

The nature
Given the characteristic of the sea, the nature cannot be clearly demarcated to the coordinates of the aquaculture zone. Nevertheless, when considering the aquaculture zone area, the site is a habitat for protected species, such as the urchin Centrostephanus longispinus, which are very sensitive to changes in water temperature and pollution. Further, parts of the sea ground are Maerl beds. Maerl beds are not protected and are declining due to exploitation and damage. They provide a habitat for highly diverse species and are very fragile (Sciberras et al., 2009). Apart from the benthic ecosystem, the water itself is a habitat and transportation system with nutrients, organic and inorganic particles being transported to a wide area (Pitta et al., 2005).

The values
Based on Kellert's classification, the value of the site is rooted in ecological-scientific and moralistic ideas. The area is important for the marine ecology. Furthermore, the neighbouring marine traffic waiting area has an utilitarian value for Maltese marine traffic. The closeness to Malta Freeport and Masaxlokk Harbour makes it important as a waiting area. Small fishermen also bestow a high utilitarian and humanistic value on the area as a traditional fishing ground. They identify themselves with the area, earn their income as fishermen or need the area for recreation.

5.4.2 Spatial misfits of the aquaculture zone policy

The previous sections have described the characteristics of the area designated as an aquaculture zone. The aquaculture farms and the zone itself can also be considered as a place with boundaries, functions, nature and values. Through the creation of the aquaculture zone and fish farming in the area, the characteristics of the place are influenced and some characteristics altered. The next sections compare the characteristics of the empty area and those of the aquaculture zone with fish farms, and determines: *to what extent do the aquaculture zone spatially misfit with the place of implementation?*

A spatial misfits refer to an incongruence of the implementing policies with the boundaries, the important functions and the nature, as well as with the cultural and other values, of a place. A misfit makes some or all measures inapt and/or inapplicable. In the case of spatial misfits, policy is implemented without agreement or harmony between the existing policy and the characteristics of a place. Table 31 represents the results of the analysis. The subsequent sections elaborate the findings.

	Place	Policy	
Characteristics	**Sea area**	**Aquaculture zone**	**Misfit**
Boundaries	**Institutional:**	**Institutional:**	
	Environment and Planning Authority	Ministry for Resources and Rural Affairs	/
	Malta Transport		+
		Fish processing	+
	Geographical:	**Geographical:**	
	Permeable	Fixed/ Permeable	/
Functions	Habitat	Habitat	+
	Fishing		0
	Shipping line		/
	Maritime Traffic Waiting Area		/
Nature	High biodiversity	Low biodiversity	/
	Maerl beds		+
	Sea urchin		+
Value	Moralistic	Moralistic	/
	Utilitarian	Utilitarian	/
	Ecologistic-scientific		+
	Humanistic		0
+ Misfit	- Fit	/ Partly misfit	0 unknown

Table 31. Aquaculture case comparison of place characteristics and identification of misfits

Boundary misfit

The boundaries of the aquaculture zone are demarcated by coordinates which are institutionally set. Official nautical charts designate the area as an aquaculture zone. By that, the area institutionally acquires the single purpose of fish farming. The fish farm cages create physical boundaries in the water. The farms attach an unnaturally high population of fish to the area. The cages are permeable, and currents provide the fish with clean water and wash away fish excrement. However mainly uneaten fish sinks to the sea bed. This significantly affect the benthic ecology. The cages of the fish farms also create new physical boundaries, especially for marine traffic. This will not significantly hamper or stop the traffic but will create risks of collisions. Conversely, the marine traffic and bunkering will be a risk for the farmed fish because water pollution such as oil spills will pass through the permeable cage boundaries. The creation of the new boundaries is thus a partial spatial misfit with the area.

Another spatial misfit occurs because the aquaculture zone policy does not take the facilities for tuna processing into consideration. Aquaculture operators need a land base for processing the tuna after the harvesting. The slicing, gutting and washing of the fish creates waste and smell whose impact exceeds the aquaculture zone boundaries. Hence the entire aquaculture activity is, both physically and institutionally not limited to the aquaculture zone. Related to this spatial misfit is the reality that the sea is under the responsibility of the Environment and Planning Authority and Transport Malta. The Local Council of Marsascala, which is affected by the aquaculture zone, is only responsible for the land. If fish waste pollutes the water, the Council is dependent on the Environment and Planning Authority and Transport Malta. Transport Malta is responsible for maritime traffic. The aquaculture zone is under the responsibility of the Ministry for Resources and Rural Affairs which, from an institutional point of view, amounts to a spatial misfit.

Function misfit

The area mainly has a natural function as a habitat, and the aquaculture zone spatially misfits with this function. The next section will elaborate on this. The aquaculture zone adjoins a Maritime Traffic Waiting Area, a bunkering area and a shipping lane. The marine traffic and waiting vessels include fuel-laden tankers for bunkering activities, including the wholesale and retail offshore sale of fuels. Even though the aquaculture zone does not directly disrupt the bunkering procedure, as recognized by the Ministry of Resources and Rural Affairs, the bunkering activity creates the possibility of oil-spill effects on aquaculture (MRRA, 2004). Therefore the Environment Impact Statement stresses the importance of "… good operational practice and proper project management …" to minimise the impact of operational oil-spills. Other risks can arise from the increase in marine traffic created from the aquaculture activity. The Environment Impact Statement recommends establishing a part of the Aquaculture Zone as a pilot scheme, to assess the nature of the potential risks. (ADI, 2005).

With regard to the function of the area as a fishing ground, it has been that fish farms can have an adverse effect on sensitive benthic communities. On the other hand, other studies have shown that fish farms attract wild fish in great numbers (Dempster et al., 2002). Hence it is unclear as to what extent the aquaculture activity significantly will disturb small fishermen and recreational fishing.

Nature misfit

The Environment and Planning Authority placed a restriction on the amount of fattened bluefin tuna allowed in the aquaculture zone. It is not allowed to produce more than 9000 tons of biomass, which is a relative high biomass density compared to Australia's bluefin tuna farms which have a lower biomass density (Scicluna & Aguis, 2006). The fattening of bluefin tuna in a short period of time requires a high stock density. However, a high stock density increase the pressure on the marine environment. Monitoring results at the existing bluefin tuna farms in Malta show that uneaten fish, fish waste and excretions that remain on the seabed beneath and alongside the cages damage the ecosystem. Although sea currents clean the site after the tuna season (July to December), the benthic environment cannot fully recover. Although improved feeding management has reduced the problem, fish waste still remains on the sea bottom (Borg & Schembri, 2006; Dimech et al., 2002). Other studies on aquaculture in the Mediterranean show that the high nutrient level around the farms attracts wild fish in large numbers, often ones not normally resident in the area. This changes the existing natural fish mix as the attracted species and the fish farms can replace other sensitive species (Dempster et al., 2002). As such, the farms have a significant impact on the pelagic and benthic environments. Another possible interaction with wild fish could involve the spread of diseases and parasites and the escape of bluefin tuna, especially during storms. Moreover the collection of wild juveniles as stock for the tuna farms harms the wild stocks (Holmer, 2010). These aspects result in a spatial misfit of the farming activity in the aquaculture zone.

Value misfit

The aquaculture zone partly misfits with the moral values that users and stakeholder bestow upon the area. From a moralistic point of view, the aquaculture zone, on the one hand, releases the coastal area from the tuna farms. Hence, the aquaculture zone reduces

coastal-user conflict and environmental damage to the coast. On the other hand, the current waste management of the farms, the way of feeding as well as the way to use wild stock juveniles for the tuna ranching, significantly harms the wild tuna stock and the maritime environment. However, the Ministry for Resources and Rural Affairs plans to use the vacated places to cultivate other species. Hence the costal land-use conflict will not be fully eliminated. The harm and distraction to the benthic environment and the wild fish stock also spatially misfits with the ecological-and scientific values of environmental NGOs and marine biologists (MEPA, 2005b).

Considering the utilitarian values: from one point of view the aquaculture zone is welcomed by fishermen and operators who profit from the zone. Nevertheless, the majority of aquaculture operators refused to relocate farms to the aquaculture zone because of the high costs. Further, the potential economic and natural risks are not clearly identified, so that the zone has a lower utilitarian value than the existing farm locations. Furthermore, many residents and businessmen of Marsascala recognize that the smells of the bait fish and the tuna processing will have adverse effects on local tourism. Therefore the utilitarian value of the aquaculture zone partly misfits with the utilitarian value of the area without the bluefin tuna farms.

It is unclear whether the aquaculture zone spatially misfits with the humanistic values. It is mainly the small and recreational fishermen who feel emotionally attached to their traditional fishing ground and fear that the aquaculture zone will exclude them from their "right" to use and enjoy the sea and the fishing. However, fish farming does not totally exclude the fishermen from the area, and the farming activity attracts many fish. There is a possibility that recreational and small fishermen will profit from the aquaculture zone.

Summary

According to our definition, spatial misfits can occur with regard to the physical and institutional boundaries, the function of the area as a habitat, with nature, and with ecological-scientific values. The aquaculture zone policy does not take the entire aquaculture activity into account as it separates the land-based aquaculture facilities from the offshore aquaculture zone. These practices result in a spatial misfit of the aquaculture zone policy as the aquaculture activity spatially and institutionally exceeds the demarcated area. Other functions of the aquaculture and adjoining areas, which are institutionally fixed and designated to specific places, are not physically fixed. For example, bunkering and oil spills could risk the fish farm activity even though the bunkering area is only adjoining. Other spatial misfits are mainly linked to the food management, the processing of fish, and waste management. These practices go beyond the aquaculture zone boundaries, affecting, nature, coastal residences, and businesses.

5.5 Investigating the origins of the spatial misfit

To investigate the origins of the spatial misfit, it is necessary to understand the actors and the implementation process. The results of the implementation process are considered as interactions between the key actors and their contexts. The spatial misfits are part of the specific case context. They are the result of the implementation process but, as part of the process, they also influence the implementation. Hence to fully

understand the spatial misfits and their interaction with the actors it is important to know whether the spatial misfit originates with the local level, the national or the European level policy. The next sections will investigate the question: *to what extent do the spatial misfits originate from the common EU aquaculture policies, or from Malta's national multi-actor interaction implementation process?*
The answer to this question will clarify whether the policy documents on the various levels recognize the place where the aquaculture farms are to be implemented and if the actors are conscious of the characteristics of the place. Moreover, the answer will show if the actors are able to harmonize the policy with the characteristics of the place. The next section initially analyses the context of the implementation process. According to Contextual Interaction Theory, the context comprises three layers, the Specific, the Structural and the Wider Contexts. Each layer refers to different factors that influence the characteristics of the actors and, finally, the implementation process. Subsequently, Section 5.5.2 introduces the key actors and Section 5.5.3 investigates their core characteristics.

5.5.1 The implementation context

The analysis of the implementation starts by investigating of the specific context. This layer includes the characteristics of the place, previous policy decisions, and the public discussion and opinion. The spatial misfit analysis contributes to clarifying this specific context. The next layer examined is the structural context which includes factors such as the multilevel governance structure and the general policy from the various governance levels that creates a framework for the aquaculture zone implementation. The wider context includes very general political, economic, cultural and technological factors.

The content analysis covers key policy documents, semi-structured interviews and newspaper articles. The analysis is partly carried out with the Nvivo word-frequency count software which indicates the degree of sensibility of the policy documents and the public discussion with regard to the place. The Nvivo word-frequency count is not the main analysis as such but it helps by identifying issues, represented by words, which are crucial in the key documents. We assume that a high words frequency represents a significant word. We use the word frequency weighted percentage based on the 1000 most frequent words. The highest weighted percentage is considered as "very important", the half as "important", the quarter is "less important" and every percentage below the eights is considered as "unimportant". The importance is measured in relation to other words and not by the issue being seen as important in the document. Table 32 lists the key words which represents the characteristics of the place.

The specific context
The aquaculture zone is outlined in a Project Description Statement, and in the Environmental Impact Statement. The public discussion and opinions are reflected in Malta's English newspapers. The following sections show the results of the Nvivo word-frequency count of the two documents mentioned above and of the newspapers. In addition, the meaning of the words and the meaning of the document are interpreted.

Characteristic of the Place	Representative words
Boundaries	Area, areas Site, sites Location, locate Situated Zone
Functions	Aquaculture Beach, beaches Fishing Recreation Diving Boat, boating Reserve, reserves, reservations Business Shop owner Tourism
Nature	Environmental, environment Landscape Nature, Natura Habitat Reef Ecology Maerl Urchin
Values	Archaeological Conservation Cultural Historical Impact, impacts Protection, protected, protecting, protect Value

Table 32 Words representing the characteristic of the place aquaculture case

The most frequently used word in the Project Description Statement is "operator, operation" (2.74) (Table 33). In context, the word mainly refers to the aquaculture operations or operators. With regard to words representing the characteristics of the place, the boundaries of the aquaculture zone are very important. The words "area and sites" have a high frequency and the analysis of the context shows that the location of the aquaculture zone is a key aspect of the project description. Considering the functions, the words "fishing and fish" are the second most used term. However, the context analysis shows that the word mainly refers to aquaculture and not to recreational fishing and small fishermen. As such, the word cannot be seen as an indicator of other functions of the place, other than aquaculture. The functions of the place are not, or only poorly, recognized according to the word frequency count. The document analysis shows that the Ministry for Resources and Rural Affairs only recognizes the bunkering area.

The report recognizes the environment but according to the word frequency count, this issue is not important. The Ministry for Resources and Rural Affairs is mainly concerned with the adverse impact that inshore aquaculture has had on the environment and stakeholders. Consequently, the aquaculture zone is consider as an improvement. Compared with the word frequency of "impact", the values of the place are less important. The word "conservation" has a high frequency (0.71) but the word exclusively refers to the Fishery Conservation and Control Division, and fails as an indicator. The project description does not describe the opportunities and challenges facing the aquaculture zone, including the characteristics of the place.

Place characteristics	Representative words Project Description Statement	Word frequency*
Boundaries	Area, areas	0.83
	Site, sites	0.95
	Location, locate	0.31
	Situated	0.31
Functions	Aquaculture	1.05
	Bunkering	0.12
	Diving	0.03
Nature	Environment, Environmental	0.31
	Habitat	0.03
	Nature	0.22
Value	Value	0.06
	Impact, impacts	0.46
	Protection, protected, protecting, protect	0.06

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: operator, operation 2.74

Table 33. Aquaculture case represented place characteristics in the Project Description Statement

The analysis of the Environment Impact Statement showed that the word "farms" is the most frequently used word (2.2) (Table 34). As with the project description, the Environment Impact Statement recognizes the boundaries. The concept of "area" is important according to the word frequency count. For instance, the word "zone" is used referring to the aquaculture zone and other zones such as those for bunkering and anchorage. Considering the functions of the place, the impact statement mainly refers to the aquaculture activity. Other functions of the place are poorly recognized according to the word frequency count. The impact statement suggests no, or only a very minor, impact for small and recreational fishermen and divers. Furthermore, similar to the project prescription, the statement only focuses on the fish ranching activity with the processing of fish considered an activity done on the vessel.

Place characteristics	Representative words Environment Impact Statement	Word frequency*
Boundaries	Area, areas	0.74
	Site, sites	0.56
	Location, locate	0.19
	Situated	0.04
	Zone	0.66
Functions	Aquaculture	0.70
	Bunkering	0.14
	Diving	0.10
	Recreation	0.06
	Tourism	0.10
Nature	Environment, Environmental	0.99
	Habitat	0.04
	Nature, natural	0.06
Value	Value	0.06
	Impact, impacts	1.62
	Protection, protected, protecting, protect	0.06
	Culture	0.10

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: farms 2.02

Table 34. Aquaculture case represented place characteristics in the Environment Impact Statement

The characteristic nature is indicated by use of the word "environment". Even though "environment" often refers to the name of the document or to the Environment Planning Authority, the word's context often relates to environmental impacts, concerns, and monitoring of the aquaculture zone. However, the assessment does not consider the area

as natural habitat with a sensitive marine ecosystem including protected species and Maerl beds. With regard to the values, the word "impact" has a high frequency. The context analysis shows that the word "impact" mainly refers to the inshore impact of the aquaculture activity and on other impacts in the area, such as on the environment and the marine activities. However, the report does not assess the overall impact, or the meaning of the aquaculture zone to the several stakeholders.

Place characteristics	Representative words Environment Impact Statement	Word frequency*
Boundaries	Area, areas	0.46
	Site, sites	0.36
	Location, locate	0.12
	Situated	0.09
	Zone	1.07
Functions	Aquaculture	0.84
	Bunkering	0.02
	Diving	0.04
	Recreation	0.06
	Tourism	0.15
	Shops	0.15
	Business	0.20
Nature	Environment, Environmental	0.67
	Nature, natural	0.12
	Ecology	0.02
Value	Value	0.02
	Impact, impacts	0.65
	Protection, protected, protecting, protect	0.05
	Conservation	0.11

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: farms 2.03

Table 35. Aquaculture case represented place characteristics in the newspapers

The public discussion in the newspapers is dominated by concerns about fish farming in general. The word "farms" has the highest frequency (2.03) (Table 35). The articles are mainly focused on Marsascala and the decision-making process of the Environment and Planning Authority. With regard to the characteristics of the place, the boundaries are important. Similar to the analysed project documents, the public discussion poorly recognizes the functions of the place. The aquaculture activity is the function that dominates the discussion. According to the word frequency count, the environment in general and the environmental impact of the aquaculture zone are also important issues although the word "environment" often refers to the Environment and Planning Authority.

A difference to the governmental project documents is in the meaning of the word "impact". The context analysis shows that the word "impact" is mainly used in the context of the Environmental Impact Statement, the negative impact of the zone on the locality, as well as on the livelihood of Marsascala residents and stakeholders.

The analysis of the two governmental documents and the public newspaper articles indicates that the project documents are focused on the aquaculture zone. The documents stress the positive impact of the zone compared to the existing inshore farming activity, and the impact of the zone on the environment. None of the documents show a sensitivity towards the functions of the place and its values. Additionally, from the identification of the spatial misfits in Section 5.4.2, it is clear that it is especially the institutional and geographical cross-boundary nature of water that creates the spatial misfits. The cross-boundary nature of aquaculture farming is an issue in the

governmental documents but is considered as manageable and insignificant because of the offshore location of the aquaculture zone. The focus of the documents on the aquaculture zone, and the neglect of other functions and values, is an indication of why non-governmental actors and the Local Council consider the Project Description Statement and the Environment Impact Statement as inadequate.

The structural context

The structural context for the aquaculture zone project comprises both the general EU aquaculture strategy and Malta's somewhat general national aquaculture strategy. The EU aquaculture policy is outlined in the 2001 and 2009 Strategies for the Sustainable Development of a European Aquaculture. Malta currently has no comprehensive national strategy, although the main national objectives are included in the 1992 Structure Plan, and in Malta's National Strategic Plan for Fisheries 2007-2013. The Structure Plan addresses general land use planning, including coastal management. The Strategic Plan for Fisheries covers all the important aspects of Malta's fishery industry. Both plans are broad, and only the parts which refer to aquaculture are analysed here.

The word frequency analysis of the Structure Plan and the National Strategic Plan for Fisheries shows that both plans stress the increase in aquaculture products in Malta. The most frequently used word is "aquaculture" (2.08), followed by the words "products, Malta, fish, and increase". Accessing the word context, both documents emphasize that the aquaculture farms must be well located. The aquaculture zone is a major strategy for increasing aquaculture fish production. With regards to the characteristics of the place, the analysed documents recognize its boundaries. Nevertheless according to the word frequency count the boundaries can be classified as not important (Table 36). The word "plans" has a relatively high word frequency but mainly refers to the name of the analysed documents, so cannot be used as a reliable indicator.

Place characteristics	**Representative Words Structure and National Fisheries Plan**	**Word frequency***
Boundaries	Area, areas	0.36
	Plan, plans, planning	0.42
	Zone	0.24
	Location	0.30
	Situated	0.12
	Sites	0.30
Functions	Bunkering	0.06
	Recreation	0.06
Nature	Environment, Environmental	0.30
	Nature	0.12
	Habitat	0.06
	Landscape	0.03
Value	Impact, impacts	0.18
	Conservation	0.06
	Value	0.24

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Aquaculture 2.08

Table 36. Represented place characteristics in the Structure Plan and the National Strategic Plan for Fisheries

Considering the functions of the place, the Structure Plan as such addresses the main functions of the coastal area. The plan does not explicitly mention every function, but stresses the need for balancing the functions. Apart from the aquaculture function, both

plans specially mention bunkering and recreation but these are not categorized as important according to the word frequency count. Further, the Structure Plan shows a sensitivity towards the environment. Considering only the parts of the Structure Plan and the fishery plan that relate to aquaculture, the place characteristic "nature" is less important according to the word frequency count. Additionally both plans have a low sensitivity toward the value of the place. The word frequency count shows that the word "values" is included in the plans, but contextually only refers to the economic value of aquaculture and aquaculture products. This indicates the utilitarian value of the fish products, but not of the place.

The examination of the EU strategy using the word frequency count approach and a content analysis, indicates that the strategy emphasises the further development of and research into aquaculture techniques. Also crucial is improving the European market position and the prices of aquaculture products. The most frequently used word is aquaculture (2.68) (Table 37). With regard to the sensitivity of the EU strategy towards the place, the characteristics are mentioned but only environmental aspects are classed as important according to the word frequency analysis.

The context analysis shows that the word "area" mainly refers to the coastal areas and the peripheral areas. Hence the word usage does not reflect the boundaries of the aquaculture farms. The functions of the place are poorly represented in the EU strategy. In terms of values, the EU strategy emphasises the impact of aquaculture on the environment.

Place characteristics	**Representative Words 2001 and 2009 EU aquaculture strategies**	**Word frequency***
Boundaries	Area, areas	0.37
	Plan, plans, planning	0.21
	Zone	0.11
	Location	0.04
	Sites	0.07
Functions	Tourism	0.04
	Business	0.07
Nature	Environment, Environmental	0.80
	Nature	0.13
	Landscape	0.07
Value	Impact, impacts	0.26
	Conservation	0.03
	Value	0.12
	Protection	0.42

* Word frequency weighted percentage out of the 1000 most frequent words
Highest word frequency: Aquaculture 2.68

Table 37. Represented place characteristics in EU aquaculture strategy

The analysis of the structural context shows that the national and the EU strategies are not very sensitive towards the characteristics of the place, even though words indicating the characteristics of the place were present. The EU planning is very sensitive towards the environment and the impacts of the aquaculture industry on the environment. Functions of the place other than aquaculture are virtually ignored.

The wider context

The wider context includes political, cultural, economic and technical factors. The environmental impact and the tolerance of aquaculture highly depends on the farm management skills of the operator and the techniques used. Culturally, the aquaculture industry in Malta has little acceptance or support. This is partly due to the aquaculture

industry itself. For instance, aquaculture operators have failed to carry out the expected monitoring and reporting. The International Commission for the Conservation of Atlantic Tunas concluded that Malta's aquaculture operators infringed the International Convention for the Conservation of Atlantic Tuna more often than other European States (MEPA, 2002; Vassallo, 2008b). The government considers the aquaculture industry to be the main polluter of Malta's coastal waters, worse than the public utilities and industrial effluent (MRRA, 2007a). The aquaculture operators are not public-oriented. For example, only two of the six operators have a website. Only one operator publishes out-of-date monitoring results and explains its aquaculture techniques. The Malta Aquaculture Producers Association also has no website where it could declare its statutes and objectives. Further, Malta has a strong tourism industry which is the main competitor.

A major problem for the tuna aquaculture is the use of wild stock juveniles which makes the bluefin tuna an endangered species. The governmental Malta Centre for Fisheries Sciences participated in an EU co-funded research project (REPRO-DOTT) that studied the reproduction of bluefin tuna in captivity. Despite major breakthroughs in the project, problems such as in the collection of eggs, hampers the commercial use of fish larvae (REPRO-DOTT, 2005). Aquaculture operators in Malta show little interest in participating and financing aquaculture research (Gov, 2007).

With regard to the economic aspects, the aquaculture industry is an important resource of foreign currencies, as it is one of Malta's few export products. bluefin tuna are mainly exported to Japan. Approximately 965 full-time jobs have been created by the aquaculture industry (FAO, 2011). The industry is for Malta so important that the former EU of Commissioner for Fisheries and Maritime Affairs, the former Minister of Foreign Affairs of Malta, Joseph Borg, successfully opposed a trade ban on bluefin tuna in 2010.

On the national and local levels, the aquaculture zone development is politicized by the two parties in parliament, the Nationalist Party (NP) and the Malta Labour Party (MLP), and by Alternattiva Demokratika -the green party outside parliament. Under the Nationalist Party, a waste recycling plant was planned in 2005 and built despite the opposition of Marsascala in 2010. The aquaculture zone was approved in the same period. The opposition parties consider the aquaculture zone as an economic, social and environmental burden for Marsascala. Opposition parties argued that the government had pushed the Environment and Planning Authority to decide in favour of the aquaculture zone.

5.5.2 The actors

The main responsible authorities that are directly involved with the implementation of the aquaculture policy are the Ministry for Resources and Rural Affairs, the Environment and Planning Authority, which is under supervision of the Office of the Prime Minister, and Transport Malta. Further, the Marsascala Local Council, which acted as the representative of the Marsascala Shop Owners' Association and the Chamber of Small and Medium Enterprise, is an crucial actor in the policy implementation process. The main non-governmental actor is the Aquaculture Producers' Association, representing several aquaculture operators.

Several stakeholders indirectly influence the implementation process. The Environmental Health Directorate of the Ministry of Health, the Elderly and Community Care is responsible for bathing water quality and food quality (hygiene rules). The Tourism Authority manages the coastal tourism zones. Apart from the governmental stakeholders, non-governmental environmental and cultural heritage conservation groups express their opinions in public hearings, newspapers, and on the internet, and in so doing influence the specific case context.

Ministry for Resources and Rural Affairs

The Ministry for Resources and Rural Affairs is responsible for safeguarding the food quality and standards (food production). The Ministry supports the aquaculture industry, and is mandated to develop export marketing opportunities for aquaculture products. At the same time, the Ministry has the task to protect and safeguard Malta's environment, and to ensure that the aquaculture industry has minimal impact. The promotion of sustainable and environmentally friendly aquaculture production is one of the Ministry's functions (MRRA, 2010b). The Ministry runs the Malta Aquaculture Research Centre, which is involved in developing sustainable aquaculture techniques. Another supporting part of the Ministry is the Fish and Farming Regulation and Control Division. It advises the Ministry and is responsible for regulating surveillance and control of fisheries and veterinary matters.

The Ministry is the institution which applied to the Environment and Planning Authority for the aquaculture zone development. As such, the Ministry is responsible for providing the project prescription and the environment impact statement to the Authority. The Minister, George Pullicino should fully support the aquaculture industry according to his mandate. Moreover, he has a close friendship with Charles Azzopardi, managing director of Azzopardi Fisheries, the biggest bluefin tuna producer in Malta. The Minister also maintains a personal friendship to the former chairman of the Environment and Planning Authority (Balzan, 2008; Galea, 2008). The aquaculture zone has a high priority for the Minister. He is promoting it as a remedy for the costal land use conflicts and the coastal environmental problems, as well as the only possibility in supporting and promoting the aquaculture industry.

The Malta Environment and Planning Authority

The Malta Environment and Planning Authority has the major task of land-use zoning and planning, according to the Environment Protection Act. All developments have to be in line with the 1992 Structure Plan, which is the main general strategic guidance on land use in Malta. The Authority is internally governed by a board which provides strategic guidance. The authority is part of the Office of the Prime Minister which gives a general strategic direction to the Authority.

The authority is a key actor in the implementation of the aquaculture policy because it allows or refuses developments. The authority permitted the development of the aquaculture zone even though it had insufficient technical plans and research on the effects of the zone (Scicluna & Aguis, 2006). The Authority also has the important function of informing the public and contacting the affected local councils about the development application (Gov, 1992). In January 2009, the court quashed the development permission because the Authority had failed to properly inform the public. As of today, the application documents for the second aquaculture zone development of

2009 are not accessible online. Further, the authority coordinates public hearings and meetings. However, the Marsaskala Local Council and other stakeholders complain that they do not have sufficient time to prepare for the public meetings because they are informed too late or do not have the necessary documents.

The Office of the Prime Minister

The Office of the Prime Minister is effectively the Ministry of the Prime Minister, Lawrence Gonzi, and has its own portfolio. The Office supervises not only the Malta Environment and Planning Authority but also the Tourism Department. The Prime Minister provides the leadership and plays a central role in decision-making. The development of the aquaculture industry is a vital part of the general national political strategy. The Prime Minister recognizes aquaculture products as important exports. Further, the aquaculture zone is in line with the tourism policy of removing the tuna farms from close to the shore. However, he remains in the background and lets the Minister of Resources and Rural Affairs, George Pullicino, direct the aquaculture zone implementation process.

Transport Malta

Transport Malta is the national authority for regulating all kinds of transport (air, rail, road, and sea) as well as the ports and inland waters. The authority is not part of the Office of the Prime Minister but depends on the government which determines its objectives and provides resources (Gov, 2009). The Maritime Section of the Authority is responsible for overall control and good order in Malta's territorial and internal waters, as well as in the ports. The Authority has the task to advise Government with regards to maritime activities and their developments. On the recommendation of the Authority, the Planning and Environment Authority, and the Ministry, decided to change the site of the initially proposed aquaculture zone. The Authority has to be informed about the position of the cages and controls the lights and radar reflectors that ensure maritime safety. The authority has also determined the area in which the aquaculture service ships will be allowed to anchor (MEPA, 2005a). Thus in the implementation process, the Authority ensures that the existing marine traffic functions are not adversely affected.

Marsascala Local Council

A local council is the local government of a locality, having a distinct legal personality, and entitled, according the Local Councils Act, to maintain public streets, footpaths, playgrounds, public gardens and cultural centres as well as the cleanliness of the locality (Gov, 1993). The local council functions as the contact between the locality and the national government. Although the local council and the mayor have no decision-making power by law in the aquaculture zone implementation process, the Mayor has the task of co-operating to ensure the better welfare of the locality. The Marsascala Local Council, together with the Marsascala Shop Owners' Association, the Chamber of Small and Medium Enterprises, and residents, organized the opposition to the aquaculture zone. At the beginning of the process, the council, supported by other local councils, started collecting signatures for a petition against the aquaculture zone. The petition was handed over to the Environment and Planning Authority. After development permission was granted, the council appealed successfully in court. The

protest continued after the Ministry re-applied for the aquaculture zone development in 2009.

Aquaculture operators
The aquaculture operators have mixed views about the aquaculture zone. The relocation of the farms to the aquaculture zone involves high costs for the operators and greater risks because of the unsheltered open sea location. The operators were not involved in the decision about the best location. From this perspective, the Malta Aquaculture Producers Association questions the Environment Impact Statement. The majority of operators are opposed to the aquaculture zone and have refused to relocate farm. From another perspective, the aquaculture operators will profit from the zone as it provides them additional space. Aquaculture operators are generally willing to increase and improve the aquaculture industry in Malta. The Environment and Planning Authority authorized the relocation of two farms into the zone immediately after the aquaculture zone was given permission to go-ahead. Despite the annulment of the permit in 2009, the two farms remain in the zone.

European-level actors
Although European-level actors did not directly influence the aquaculture zone development, the position of the former EU Commissioner for Fisheries and Maritime Affairs, the former Minister of Foreign Affairs of Malta Joseph Borg, in opposing the ban on trade in bluefin tuna safeguarded Malta's aquaculture industry. In this matter, Malta's aquaculture policy influenced the European Commission's fishery policy. A ban on trade in the wild stock bluefin tuna would have significantly damaged or even destroyed Malta's aquaculture industry. The EU has co-financed Malta's research activities aimed at sustainable aquaculture industry development. Joseph Borg has personally supported Malta's research activities. Further, Malta's permanent representatives in Brussels represent Malta's interests and try to ensure that Malta is not negatively affected by the common fishery policy.

5.5.3 The core characteristics of the key actors

The preview sections have described the key actors, their positions and roles in the implementation process. The positions, roles and behaviour of actors, as well as the way they interact with other actors, is influenced by many factors. However, according to the Contextual Interaction Theory, only three core actor characteristics, namely motivation, cognitions, and capacity and power, directly influence the actors and their social interactions. As explained in section 2.6.4 the core characteristics are not individual independent variables but are embedded in the contexts outlined in Section 5.5.1. The sections below examine the core characteristics.

Motivation
Motivation is the driving force that initiates and directs actors. Motivation can be rooted in an actor's personal values and goals, or in external pressures. Table 38 lists the relevant actors and their sources of motivation for implementing the aquaculture zone. The sections that follow elaborate on the table.

Actors	Sources of Motivation
EU Commission	Common EU fisheries policies. Sustainable aquaculture strategy, specific aquaculture goals. EU law, directives, agreements, guidelines. International agreements. Malta's National Strategic Plan For Fisheries 2007-2013.
Ministry for Resources and Rural Affairs	EU law, directives, agreements, guidelines. Malta's National Strategic Plan For Fisheries 2007-2013. Pressure from tourism industry, aquaculture industry, environmentalists. National Law. Ministerial responsibility.
Malta Environment and Planning Authority	EU law, directives, agreements, guidelines. Pressure from Minister of Resources and Rural Affairs, tourism industry, aquaculture industry, environmentalists. Development and Planning legislation.
Office of the Prime Minister	Malta's National Strategic Plan For Fisheries 2007-2013. Foreign devises. Alternative industries for tourism. National law.
Transport Malta	Marine safety. Flow of marine traffic. National law.
Marsascala Local council	Personal commitment. Local Council Act. Pressure from small local business owner, small fishermen, residents.
Aquaculture operators	Profit. Expansion. Costs of replacement. Risks, (storms, oil spill). National Law.

Table 38. Source of motivation of the key actors aquaculture case

The EU Commission is not directly motivated to implement an aquaculture zone in Malta. However, the Commission is interested in increasing aquaculture production in the EU to protect the environment, consumers and animal health. The introduction of the aquaculture zone in Malta supports the vision of the EU. The zone aims to create more space for aquaculture species other than tuna, and to increase aquaculture production while protecting the costal environment. Further, the governmental research projects are trying to create closed lifecycles for the bluefin tuna, to reduce or stop the use of wild fish juveniles. This supports the EU idea of aquaculture as a remedy for overfishing. This has motivated the Commission to co-finance Malta's bluefin tuna research projects.

On the national level, the main source of motivation for the Ministry for Resources and Rural Affairs are the land-use conflicts resulting from the bluefin tuna production close to the shore, as well as the demand of the aquaculture industry for more space. Further, aquaculture is considered an important part of Malta's fishery industry that creates stable and safe jobs for fishermen. The bluefin tuna is also one of Malta's few export products and a source of foreign currencies so the government is motivated to increase production. Another source of motivation is environmental protection. The Ministry is committed to protect the environment. The highly adverse impact of the tuna ranching close to the shore is experienced and documented. Moving the tuna farms further offshore would improve the local costal environment.

The Malta Environment and Planning Authority has to react on to the development application from the Ministry for Resources and Rural Affairs. The Authority has the mandate to manage land use and to contribute to solving land-use conflicts, as well as to

protect the environment. As such the national law and its mandate motivates the Authority to implement the aquaculture zone. Additionally, as part of the Office of the Prime Minister, the Authority has to support the general national policy direction. The authority faces ministerial pressure from its own Ministry and from the Ministry for Resources and Rural Affairs. The Office of the Prime Minister includes not only the Environment and Planning Authority but also the Tourism Authority. The implementation of the aquaculture zone responds to the demands of the tourism industry to remove the bluefin tuna farms that are close to the shore. Turning to Transport Malta, this authority depends on the Government which determines its objectives and provides resources. Therefore, the transport authority has to follow the line of the government and support the implementation of the aquaculture zone. However, the safety and flow of maritime traffic is vital for the Maltese economy and so the aquaculture zone should not endanger marine traffic. The aquaculture zone has been implemented with this in mind.

At the local level, the Marsacala Local Council is not motivated to support the aquaculture zone. The authority has several reasons to hinder or stop the implementation. Many residents, small fishermen, and business owners have negative experiences with the tuna farms close to the shore. Additionally, industrial developments such as the waste recycling plant in Marsaskala and the Delimara Power Station, in the adjoining local council Marsaxlokk, makes the area less attractive for tourists. The Mayor of Marsascala is personally committed to striving for a blue flag, an eco-label, for the beach in Marsascala, and to conserve and improve Marsascala as a touristic destination. Local and small businessmen, fishermen, and residents pressure the local council to object to the aquaculture zone implementation.

The aquaculture operators partly support and partly oppose the aquaculture zone. The aquaculture operators are motivated to increase their profit. However, the removal of the farms from the shore to the aquaculture zone creates space at the shore for species other than tuna. For companies which solely specialize in bluefin tuna, the aquaculture zone only means new investment costs and new risks. These aquaculture producers do not support the zone. Others which see a possibility to increase output and to invest in aquaculture production as such welcome the zone.

Cognitions

The actors' key characteristic of cognitions comprises frames of reference and boundary judgments. It refers to the learning process of actors and to their acceptance of new information. What is important is actors access to information and how the actors communicate and interpret the aquaculture zone. Table 39 shows the information that actors emphasize, how, and with whom, they communicate, and how actors understand the aquaculture zone implementation. The subsequent sections elaborate on the table.

In the cognitions of the European Commission, the implementation of the aquaculture zone is Malta's own affair as long as it is in line with European and international law. The EU Commissioner for Maritime Affairs and Fisheries, and Malta's Fisheries Attaché, represent Malta's interests at the European level. During meetings of the Agriculture and Fisheries Council, Malta's Minister informs the Commission about its objectives and emphasizes the national importance of the aquaculture industry for Malta.

The Ministry for Rural Affairs and Resources regards the aquaculture industry as vital and important for Malta's economy. The Ministry conceives itself as not responsible for the overfishing of bluefin tuna as the industry in Malta is controlled and acts according EU and international law. Its own research, and the improvement in feeding management and aquaculture techniques, shows the Ministry that the impact of the farms on the environment is manageable. That encourages the Ministry to invest in and support the aquaculture industry in Malta. With regard to the aquaculture zone implementation, the Ministry focuses on the tuna ranching, not on the entire process that includes tuna processing. According to the Ministry, it is sufficiently informed and communicates with stakeholders according to the requirements.

The Marsascala Local Council and the aquaculture operators are not considered as actors in the process but as stakeholders whose opinions have been recognized. The fears of the local council and other stakeholders which are represented by the council are dismissed as baseless, grounded mainly on misconceptions about aquaculture. The area determined for the aquaculture zone is considered as the best possible area, and this largely satisfies the actors and stakeholders. The decision of the court to override the development permission granted by the Environment and Planning Authority, is understood as formal irregularity, done by the Authority.

The Environment and Planning Authority regards itself as not responsible for the implementation of the aquaculture zone. It evaluates and grants permits for the aquaculture zone according to the national law and guidelines. The authority focuses on the local and national environment and does not evaluate the worldwide effects of the tuna ranching as such. With regard to communication, the authority did inform the stakeholders according to the law, but also recognizes that it wrongly placed a public notice. From the perspective of the authority, it even published the second development application twice after protests from several stakeholders. Communication with governmental actors is described as good.

The analysis of the Office of the Prime Minister shows that the Prime Minister, similar to the Ministry for Resources and Rural Affairs, considers the aquaculture industry to be vital for Malta's economy. However the Minister acts in the background and lets the Ministry implement the aquaculture zone. Turning to Malta Transport, this authority follows the point of view held by the Ministry and is focused on its mandate. The aquaculture zone is not considered a risk to maritime safety and traffic. As such, the zone is in line with national law.

The Masascala Local Council is mainly focused on the negative experiences with the aquaculture farms close to the shore. Despite monitoring programs and improvements in the feeding techniques, they still find dead bait fish on the beach. The council stresses the entire production cycle. Especially the harvesting and the cleaning of the fish is considered as a disturbance. The council experiences that governmental entities do not inform or only poorly inform the council on the aquaculture zone development. For instance, the council was not given sufficient time to view plans and documents and to prepare well for the public meeting. The public consultation meetings are conceived as public hearings, which allow no public discussion under equal conditions.

The incorrect placement of the public notice is considered by the council as a governmental strategic tool to exclude the council and other stakeholders from the

Actor	Focused information	Communication with other actors			Case problem understanding
		Method	**Actors**	**Quality**	
EU Commission	**I**nternational commitments (Convention of the International Commission for the conservation of Atlantic Tunas). **S**ustainable aquaculture, markets and research.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact.	**M**inistry for Resources and Rural Affairs. **O**ffice of the Prime Minister	+ +	**A**quaculture zone implementation is Malta's own affair. **E**U responsible to encourage sustainable aquaculture, financially support research, investment in new technologies.
Ministry for Resources and Rural Affairs	**I**nternational commitments (Convention of the International Commission for the conservation of Atlantic Tunas). **L**and-use conflicts at the coast. **F**ocus on tuna farming, not the entire process. **E**nvironmental impacts at the coast. **M**alta's market position, aquaculture increase.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**F**ish and Farming Regulation and Control Division **G**overnmental stakeholders **A**quaculture operators **O**ther non-governmental stakeholders **E**U Commissioner for Maritime Affairs and Fisheries. **F**isheries Attaché	+ + + / +	**T**una production at the coast creates environmental problems and land-use conflicts. **T**una production offshore reduces land-use conflicts and environmental problems. **I**mplementation halted because of formal irregularities at the Environment and Planning Authority and decision of court. **M**arsascala Local Council is a stakeholder. **M**inistry follows the rules with regard to public consultation. **M**inistry is transparent towards the stakeholders. **T**una production important for Malta's economy. **T**una conservation necessary but tuna trade ban unnecessary. **E**U Tuna quota cut is unjustified.
Office of the Prime Minister	**L**anduse conflicts at the coast. **E**nvironmental impacts at the coast. **E**conomic importance of aquaculture industry.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**M**inistry for Resources and Rural Affairs	+	**A**quaculture important for Malta's economy. **A**quaculture source of environmental problems and land-use conflicts. **T**una production offshore reduces land-use conflicts and environmental problems. **A**quaculture zone implementation is the affair of the Ministry for Resources and Rural Affairs.
Malta Environment and Planning Authority	**N**ational Development Planning Legislation. **D**evelopment application. **E**nvironment Impact Statement. **R**eports from the aquaculture operators. **I**nformation from the Ministry for Resources and Rural Affairs	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**M**inistry for Resources and Rural Affairs **G**overnmental stakeholders **A**quaculture operators **O**ther nongovernmental stakeholders	**+** + 0 /	**E**valuation of development applications and issuing development permits according to the guidelines and the land-use planning. **A**quaculture zone permitted within legal framework. **W**rong placed public notice is an error in process.
Malta transport	Marine safety. Marine traffic flow.	**O**fficial letters. **E**-mails. **T**elephone. **P**ersonal contact.	**M**inistry for Resources and Rural Affairs. **M**alta Planning and Environment Authority.	+ +	**A**quaculture zone is implemented according to the national law and recognizes the marine safety and Marine traffic flow.

Marsascala Local Council	**F**ormer negative experiences with aquaculture. Entire aquaculture process. **N**egative local economic ecological consequences. **E**nvironment Impact Statement. **I**ndependent evaluation of the Environment Impact Statement. **G**overnance, legitimacy, participation.	**P**rotest letters. **P**etition. **E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**M**inistry for Resources and Rural Affairs. **M**alta Planning and Environment Authority	- -	**A**quaculture has a adverse impact on the environment, the locality and tourism. **T**he Ministry and Environment and Planning Authority do not properly inform the local council and stakeholders. **W**rongly placed public notice, part of the governmental strategy. **D**evelopment was already decided from the beginning, permission process only because of the law. **T**he council has the right to protest but without effect. **A**quaculture zone only in the interest of the aquaculture operators. **T**reatment linked to political party affiliation.
Aquaculture operators	**I**nternational and national law. **T**he market. Increasement **N**egative effects of the aquaculture zone, e.g. costs risk **P**ositive effects of aquaculture industry.	**E**-mails. **T**elephone. **P**ersonal contact. **M**edia.	**M**inistry for Resources and Rural Affairs. **M**alta Planning and Environment Authority	- 0	**A**quaculture important industry for Malta. **V**ery strong tourist and environment lobby in Malta. **A**quaculture zone positive for further investment and growth. **A**quaculture zone, source of higher risk. **A**quaculture areas close to the shore were permitted, because it had no adverse effects on the environment and tourism. **A**quaculture operators need a certain scale to be able to survive and compete on the international market. **A**quaculture sustainable, tuna stock is recovering.

+ Good communication, / Sufficient communication, 0 No information, - Bad communication according to the actor

Table 39. Cognitions of the key actors aquaculture case

process. The council explains the disadvantaging treatment through the political hegemony of the Malta Labor Party in the south of Malta. Further, the council understands the aquaculture zone development to be a project which only serves the aquaculture operators. The boat trip involving the Minister for Resources and Rural Affairs, the largest tuna producer in Malta, and the former chairman of the Environment and Planning Authority, as well as their publicly confirmed deep friendship, has increased the distrust of the local council. The council is convinced that the implementation of the zone was already decided from the beginning.

The aquaculture operators regard the aquaculture zone as a remedy for the lack of space close to the shore. The strict and restrictive land-use legislation in Malta is considered as favoring the tourism industry and the environmental lobby. However, the operators need to be of a certain size to compete on the international market. The aquaculture operators stress that they have invested in aquaculture techniques and have improved the feeding management, and their own monitoring studies show that the environmental impact of the aquaculture industry is limited to the area directly located the cages (Ecoserv, 2007). Hence the operators consider themselves as a sustainable industry, one which helps to avoid overfishing, protects the environment, and creates stable jobs.

On the other hand, the majority of aquaculture operators stress that they have had no significant adverse impact on the coast, so that there is no need to move existing farms offshore. These operators are focused on the costs of the move and the uncertainties and risks from storms and oil spills. Although some operators have personal contacts with the Ministry and the Environment and Planning Authority, and tightened their cooperation with governmental actors through conferences and joint research projects, the operators consider themselves largely excluded from the aquaculture zone implementation process. As with the local council they were only informed by governmental entities, and could then react to decisions.

Capacity and power

According to Contextual Interaction Theory, capacity and powers describe the actors' capabilities to hamper or to change the process towards specific or their own purposes. In the implementation process, actors exercise and attribute power to other actors. Viewed as important for the stabilization of power, is access to and the availability of resources (Table 40).

The European Commission is not directly involved in the aquaculture zone implementation, but has influenced the idea of sustainable aquaculture in Malta. The Commission co-finances research on sustainable aquaculture and has provided a platform for knowledge exchange. After accession to the EU, Maltese operators heavily invested in technical innovations and changed feeding management to decrease the impact of the aquaculture industry on the marine environment. In addition, European law obliges Malta's government to monitor the water quality, the use of chemicals, and fish production. Another aspect here is the protection of the bluefin tuna. During preparation for accession to the EU, Malta became a full contracting party of the International Commission for the Conservation of Atlantic Tunas in 2003. The EU has been a member since 1997. Through its membership, Malta had to allow an international party to investigate Malta's bluefin tuna fishing activity, and this also required the government to participate in conservation measures. The European

Commission regulates and allocates the bluefin tuna fishing quota for Malta and demands full monitoring of the tuna supply chain, from capture to market. Membership creates legitimacy for the aquaculture farms.

The Ministry for Resources and Rural Affair forces the aquaculture operators to monitor and report on their activities. Conversely, the aquaculture operators influence the government to support the industry. Aquaculture has become a stable provider of jobs in the fishery sector, and the bluefin tuna has become an important export product.

Close personal friendships between the Ministry and the Planning Authority strengthen the contact but decrease the legitimacy of the implementation process. With regard to the aquaculture zone, the Ministry is the driving force behind the policy. It developed the aquaculture zone project and determines who is to be part of the implementation process. For instance, the committee which chose the site for the aquaculture zone included only government entities. The local council was informed only after details of the zone had been decided. The Ministry also determines if information is to be made accessible. Even if requested by stakeholders, basic information such as project prescriptions, technical details and public hearing minutes are held back. This increases the dependence, the exclusion and the mistrust of actors and stakeholders.

The Environment and Planning Authority is a powerful actor because it decides if a full Environment Impact Assessment is required and it has to allow any development. They decided that the aquaculture zone development did not need a full Environment Impact Assessment. However, independent experts concluded that the Environmental Impact Statement was insufficient to estimate the environmental and social impact of the aquaculture zone. The Authority nevertheless permitted the zone, and the relocation of farms. The close contact to the Ministry, as well as to part of the Office of the Prime Minister, results in a lot of ministerial pressure which questions the independency of the Authority. The Office of the Prime Minister mainly delegated power to the Ministry of Resources and Rural Affairs, and acted carefully in the aquaculture case. The Prime Minister provided legitimacy for the aquaculture project by expressing the importance of the aquaculture zone in parliament and in public.

The Marsacala Local Council is treated by the Ministry for Resources and Rural Affairs, and the Environment Planning Authority as a stakeholder. However, the council managed to become an actor in the implementation process by organizing itself with other stakeholders, communicating through the media, and appealing against the decision in court. As a reaction, the Ministry of Resources and Rural Affairs and the Environment and Planning Authority increased control over information on the second development application. For example, the local council protested in public about the poor timing of the publication of the public notice for the second development application, and forced the Environment and Planning Authority to publish it again. Even though the Council became an actor in the implementation process, other governmental actors did not negotiate with it.

Actors	Exercised power	Attributed power	Resources
EU Commission	**D**ecision on co-funding sustainable research projects and policies. **D**emanded Malta's National Strategic Plan For Fisheries 2007-2013. **D**emand for monitoring and reporting of fish production, water quality and food quality. **P**rotection of certain habitats and bird species. **S**igning international agreements. **R**egulation of a fishing quota for bluefin tuna.	**M**inistry submits National Strategic Plan For Fisheries 2007-2013. **M**inistry monitors and reports e.g. fish production, water quality and food quality. **M**inistry participates in knowledge-exchange programs on sustainable aquaculture. **M**alta becomes contracting party of the International Commission for the Conservation of Atlantic Tunas.	**E**U policy, sustainable aquaculture strategy. **E**U law. **L**egitimacy. **F**unding. **T**echnical knowledge. **C**lose contact with the Ministry for Resources and Rural Affairs.
Ministry for Resources and Rural Affairs	**D**eveloping and partly deciding aquaculture policy and aquaculture zone strategy. **M**onitoring of the aquaculture operations. **A**pplying twice for the aquaculture zone development. **I**ncluding and excluding actors from the implementation process. **D**etermining the status of information: strictly confidential or public. **D**etermining the accessibility of information.	**A**waits decision of the Environment and Planning Authority. **A**ctors do not publish strictly confidential information. **T**ransport Malta and Authorities of the Office of the Prime Minister carry out and support the aquaculture zone policy. **A**quaculture operators monitor and report fish production.	**N**ational Law. **L**egitimacy. **J**obs. **C**lose contact with the European Commission, Prime Minister, other Ministers, the Environment and Planning Authority and aquaculture operators.
Malta Environment and Planning Authority	**D**ecides about need for an Environment Impact Assessment. **A**dvises the Ministry on planning and environmental aspects. **D**ecides on accessibility of information. **D**ecides on development permission.	**M**inistries applies for development permission. **M**inistry negotiates with the Authority.	**E**nvironment Impact Assessment. **P**lanning and Development Act. **P**lanning and environmental knowledge. **J**obs. **C**lose contact with the Ministries and Authorities.
Office of the Prime Minister	**P**rioritize aquaculture industry development. **A**ppoints and dismisses ministers. **R**earranges authorities.	**M**inistries and Authorities follow national policy direction and carry out national policy.	**N**ational Law. **H**ighest hierarchical position in the governance structure. **L**egitimacy. **F**inances. **C**lose contact with the Ministries, Authorities and EU Commission.

Malta transport	**D**ecides on marine safety and traffic	**M**inistry changed aquaculture zone position. **M**inistry and Authorities negotiate with Malta Transport.	**N**ational Law **C**lose contact with the Ministries, Authorities.
Marsascala Local Council	**O**rganizing and mobilizing support for non-implementation of the aquaculture zone. **E**nforcing access to information. **A**ppealing against the development permission.	**M**inistry recognizes protest. **M**inistry stopped relocation of farms. **M**inistry re-applied for development permission. **E**nvironment and Planning Authority has to properly inform the council.	**N**ational Law **M**edia **S**cientific knowledge. **E**lectorate
Aquaculture operators	**L**obbying for aquaculture. **P**roviding and creating jobs. **C**reate independent evaluation of the Environment Impact Statement. **S**upport appeal against permission. **R**efusing relocation.	**M**inistry supports aquaculture industry on EU level. **M**inistry and EU support aquaculture inccreasement. **M**inistry stopped relocationof farms. **M**inistry cooperates with aquaculture operators. **M**inistry and Environment and Planning Authority negotiate with aquaculture operator.	**N**ational policy. **E**U policy. **E**conomic power. **P**ersonal and close contact with the Ministry and the Environment Planning Authority. **A**quaculture knowledge.

Table 40. Capacity and Power of key actors aquaculture case

The aquaculture operators are expected to follow the regulations and guidelines issued by the Ministry for Resources and Rural Affairs. Nevertheless, the operators have become an economic force in Malta. Similar to the Local Council, governmental actors treat the aquaculture operators as stakeholders and largely excluded them from the decision-making process. The Malta Aquaculture Producers Association, engaged experts for an independent evaluation of the proposed aquaculture site, and some aquaculture operators supported the court appeal against the development permission. After permission was granted by the Environment and Planning Authority, only two of the five operators moved to the zone. The others refused to relocate their farms. However, the Ministry needs the cooperation and investments of the aquaculture operators if it is to increase the aquaculture industry in Malta. The Ministry did not enforce the relocation of the farms and had stopped even before development permission was revoked by the court.

Summary

The aquaculture zone implementation process in Malta has been strongly influenced by the actor characteristics of cognition, and of power and capacities. The government's intention with the aquaculture zone is to protect the coastal environment and to limit the impact on tourism. This objective is similar to the objectives of the Local Council, small fishermen and local businessmen in Marsascala (motivation). At the same time the aquaculture zone aims to support the aquaculture industry and responds to the demand for increasement (motivation). Nevertheless, the local council and the majority of the aquaculture operators did not support the aquaculture zone implementation and hampered the process.

The analysis of the actors' characteristic of cognition shows that the Environmental Impact Statement was not sufficient to legitimate the aquaculture zone and to justify the relocation costs and risks of the aquaculture operators. The relocation costs and risks are also a motivation, and are influenced by capacity and power. the impact statement failed to clarify the social impact. Due to the poor access to information and exclusion (capacity and power), non-governmental actors and stakeholders mistrusted the government and the accuracy of the governance process. The poor access to information hampered the learning process of non-governmental actors. For instance, the local council had to mainly rely on its own predominantly negative experiences with bluefin tuna farming close to the shore. Infringements by several aquaculture operators, published in the media solidified the negative experience. Moreover, the aquaculture industry itself was poor in its public orientation.

On the European level, there is no strict policy to guide the national aquaculture policy. The sustainable aquaculture policy can only stimulate (influencing cognitions) but not enforce. On the national level, the Ministry for Resources and Rural Affairs was initially successful in applying for the development of an aquaculture zone. The central governance structure and the exclusion of non-governmental actors was effective until the Ministry needed the agreement and the cooperation of the Local Council and the aquaculture operators (capacity and powers). Although the Ministry needed the Council and the aquaculture operators, they still had to enforce their participation in the implementation process by appealing in court against the permitted development, and refusing to relocate (capacity and power).

5.6 Origins of the spatial misfits

This section investigates the origins of the spatial misfits. The guiding question for the analysis was: *to what extent do the spatial misfits originate from the common EU aquaculture policies or from Malta's national multi-actor interaction implementation process?* This question is considered as relevant because its answer will show if the spatial misfit originated on the EU level and/or in the national and local implementation processes. According to our spatial misfit definition, a spatial misfit does not only mean that a policy does not fulfill the purpose and cannot be adjusted to the specific place characteristics, it also means that actors do not or cannot agree on a policy and cannot harmonize the policy with the characteristics of the place.

The examination of the structural context, which includes the sustainable aquaculture policy of the European Commission indicated that the EU policy is highly sensitive to the environment but recognizes less well the several functions of the coastal area. Additionally, the analysis of the characteristics of the European actors shows that the European Commission's policy is too weak to steer Malta's national policy, and that it is Malta's national policy objectives and interests that partly guide the European aquaculture policy. The European Commission succeeded in stimulating the use of new technologies and in enforcing strict monitoring of the bluefin production cycle, but was not able to ban the use of wild stock bluefin tuna juveniles. These aspects are part of the structural context which influences the actors but is not decisive in Malta's aquaculture zone policy.

Level	Actor	Factor	Actors characteristics
National	**Ministry for Resources and Rural Affairs**	**F**ocus on the farming process only. **F**ocus on the aquaculture zone area. **C**onsidering the existing functions in the zone as insignificant. **I**nsignificant research. **L**ack of transparency. **E**xclusion of actors.	Cognitions. Cognitions. Cognitions. Cognitions. Cognitions. Capacity and Power.
	Environment and Planning Authority	**F**ocus on the farming process only. **F**ocus on the aquaculture zone area. **L**ack of full Environment Impact Assessment. **P**ermitting development	Cognitions. Cognitions. Cognitions Capacity and Power.
Local	**Marsaskala Local Council**	**F**ocus on own experiences.	Cognitions.
	Aquaculture operators	**L**ow public-orientation. **F**ocus on the aquaculture zone area.	Cognitions. Cognitions

Table 41. Spatial misfit origins aquaculture case

With regard to the aquaculture zone, factors stimulating the spatial misfits are mainly located on the national and local levels. Some factors are already included in the content of the policy that originated at the national level (Table 41). For instance, the focus on the farming process alone, which neglected the effects of tuna processing. Another, is the environmental focus on the aquaculture zone area, undervaluing the wider environmental effects. Other factors originated in the implementation process on the national and local levels. The exclusion of the local councils and the aquaculture

operators led to a policy which to an extent neglects the functions of the place and the needs of the aquaculture industry.

The actors were unable to harmonize the policy with the specific characteristics of the place. The permission granted by the Environment and Planning Authority without a full Environment Impact Assessment increased the mistrust of the non-governmental actors and resulted in a blocking of the policy. Further, neither the Ministry for Resources and Rural Affairs nor the aquaculture industry were able to change the negative conceptualizations of the local council. The lack of transparency combined with infringements by the aquaculture industry increased the negative image and resulted in the blocking by the local council.

5.7 Summary and conclusions

Two pivotal questions were answered in this chapter: *to what extent does the aquaculture zone spatially misfit with the place of implementation, and to what extent do the spatial misfits originate from the common EU aquaculture policies or from Malta's national multi-actor interaction implementation process?*

Considering the first question, the investigation into the characteristics of the place showed that the policy spatially misfits with the characteristics of nature and the place function as a natural habitat. This partly originated in the content of the policy which stresses only the aquaculture zone area, and so partly neglects the permeable character of aquaculture activity and the processing of the fish. This created a spatial misfit with the boundaries. Further, the aquaculture zone policy has a different scope than the aquaculture activity. As such, the content of the aquaculture zone policy ignores many functions of the coastal area and stresses only the functions of areas that adjoin the aquaculture zone. This partially creates a spatial misfit between the functions of high standard tourism and fish farming, as well as between bunkering and fish farming. The different scopes of the aquaculture policy and of the aquaculture activity also influence the values of the place. The aquaculture zone, for the government, mainly has an utilitarian value, while stakeholders and users of the area bestow moralistic and ecological-scientific values on the place.

With regards to the origin of the spatial misfits, they partly originate in the content of the national policy and partly in the national and local implementation process. The aquaculture zone policy was mainly decided upon without the expertise of the aquaculture industry and of local stakeholders. Further, the policy was not sufficiently grounded on scientific research. The Ministry of Resources and Rural Affairs was not able to sufficiently clarify the need for the aquaculture zone, and so justify the relocation costs and the risks of the aquaculture zone. This lack of transparency and exclusion encouraged the blocking behaviour by the non-governmental actors. The case is thus characterized by a central and hierarchical governance structure, combined with some elements of power-sharing. The case demonstrated that the public participation tool can only create harmony with a policy if the government is willing to recognize stakeholders as actors, to exchange knowledge and to share responsibilities. Further, the case shows the dependency of the European Commission on the willingness of the member states to share its objectives and support its policies.

Chapter 6

Discussion and Conclusions

6.1 Introduction

Since Malta's accession to the EU, many Maltese citizens ascribe the positive policy changes to the EU accession. If you would ask where the bad policy changes came from, the answer would probably be the same. That is, many policy changes and policy implementations in Malta are attributed to the EU. While the EU policy is abstract at the EU governance level, it becomes concrete at the national and local governance levels. The policy, made for all EU states, is implemented at the local level in a certain place. This place is used and conceived in various ways: by politicians, users, residents and stakeholders. Users often personally identify themselves with the place. The impact of a policy on a place is therefore not only physical (linked to geographical boundaries and nature) but also impacts on the characteristics of a place: the institutional boundaries, the functions and the values that people bestow on the place. The place of policy implementation is influenced by the policy and vice versa, the place influences the policy implementation process. The policy, made at the EU governance level, is often not tailor-made for national and local implementation, and sometimes it seems that the policy does not spatially fit with the characteristics of the place during its implementation. In the case of a spatial misfit, an incongruence of the implementing policies with the boundaries, the nature, the important functions as well as the cultural and other values of a place occurs, making the measures inapt and/or inapplicable.

This research has investigated two questions: *to what extent do the EU policies spatially misfit with the place of implementation in Malta, and to what extent do the spatial misfits originate from the common European policies or from Malta's national multi-actor interaction implementation process?* Five cases have been analysed, representing three different EU policy sectors: the implementation of the Trans-European Transport Network in Malta (two cases), the implementation of the renewable energy policy (two cases) and the implementation of the aquaculture policy (one case) in Malta. The analysis has found spatial misfits in all five cases. All five cases are embedded in the same central and hierarchical governance structure in Malta, and all three policy sectors are influenced by EU policy. Nevertheless, in every case, the implementation process was influenced by factors linked to the case-specific context and actors. For analysis of the spatial misfits of place and policy, the place concept has been differentiated into four characteristics of place: boundaries, functions, nature and values. This differentiation made it possible to compare places and policies and to detect the features they share.

6.2 Spatial misfit results

In all five cases, the policy showed spatial misfits with the place of implementation. Considering place characteristics, the boundaries define and limit place. Similar boundaries exist in policy, defining for example measures, target groups, location, stakeholder groups and responsible officials. The boundaries of the place and the policy create a certain order for the process. The analysis of the spatial misfits in all five cases shows that it is the policy that mainly misfits with the boundaries (Table 42). The misfits result from changes in user rights without the agreement of the users, the creation of new boundaries that fragment habitat and the failure to control negative side-effects because of permeable boundaries. The harmonization of the boundaries, reflecting, ordering principles, identity, control and unity seems to be vital for a policy to be appropriate and applicable. The analysis of the identified functions shows that spatial misfits do occur, but that the implementation of a policy rarely replaces or eliminates all the functions of a place. The analysis also shows that some functions seem to be more flexible than boundaries, and that functions can be easily replaced within the boundaries of a place. A good example is that of recreational fishermen who fish in the vicinity of fish farms because of the wealth of fish around the farms. The analysis indicates that as long as the policy allows multiple functionality of a place, spatial misfits can be avoided.

With regard to the place characteristic of nature, Malta is a good example of how humans create options for nature and nature creates options for humans. Malta's natural beauty is the flagship of Malta's tourism industry. Nature, as an analytical distinction of place, creates a greater sensibility towards the place. Without this distinction, nature could be considered as a given or "natural". Malta's scarcity of natural areas, increases their value, exemplified by the powerful position of Malta's Environment and Planning Authority. Since most unbuilt places in Malta are still natural, policies requiring a physical implementation are frequently confronted with their effect on nature. Moreover, the Environment Impact Assessment became a policy instrument which opened up Malta's central governance structure. The question of the environmental effects of a policy became representative of democratic rights and governance. Spatial misfits with regard to nature are quantitative, similar to the number of functions (Table 42). In the transport cases, the implementation of a new road was shelved because of the impact on the environment. The wind-park projects in the renewable energy cases, are still awaiting a decision by the Environment and Planning Authority on their environmental impact. This demonstrates that nature can be a decisive factor of a place, and for the policy implementation process in Malta.

The final analytical differentiation involved the place characteristic of values. Values do not necessarily derive from the geography of the place, rather people bestow certain values on a place. Most values that make a policy spatially misfit do so because the policy has no additional utilitarian value for the users and potential users of the place. Such a spatial misfit occurred in all five cases. Further, the users and stakeholders of a place bestowed a high priority on the natural value and the landscape, having strong moralistic reasons for not destroying their natural heritage, and having a high personal attachment to the area. The analysis of the five cases shows that values of a place are difficult to replace such that they remain similar to what was found within the boundaries. The Manikata transport case indicates how the values of the farmers,

symbolizing Malta's tradition, questioned the legitimacy of the proposed policy. The roads lack of utility became a European issue through an EU parliamentary question. Eventually, the, government stopped the policy implementation.

Comparing the five cases, it is clear that most spatial misfits occurred in the transport cases. The lowest number of spatial misfits were found in the aquaculture case. Table 42 displays the number of spatial misfits by policy sector and case, and characteristics of the place. In terms of the characteristics of a place, most spatial misfits occur with the boundaries and the values. A brief look at the current outcome of the implementation processes indicates that the implementation processes were stopped in the transport sector. In the energy sector, the processes are still on-going, and depend on the decision of the Environment and Planning Authority. In the aquaculture case, the aquaculture zone was implemented, but the government did not force operators to relocate their farms and so the zone does not work to its planned capacity. based on the results, the case with the highest number of spatial misfits had the most difficulties during the implementation process, which ended up in a deadlock. The case with the fewest spatial misfits saw an implementation process that forged ahead.

Characteristics of the place						
EU Policy Sector	**Trans-EU Transport**		**Renewable Energy**		**Aquaculture**	**Total**
	Case 1	Case 2	Case 3	Case 4	Case 5	
Boundaries	3	6	1	4	2	16
Functions	3	2	1	2	1	9
Nature	2	2	2	1	2	9
Value	4	3	4	2	1	14
Total	12	13	8	9	6	48

Table 42. Number of spatial misfits

The number of spatial misfits and the course of the implementation process support the assumption that spatial misfits make a policy inapt and/or applicable. The actors in the implementation process need to align the policy and the characteristics of the place. The examination of the implementation process has shown that the exclusion of actors, communication through the media, a lack of motivation and willingness, and fear all hamper the process of harmonizing the policy with the place. The number of spatial misfits also raises the question as to the origins of the spatial misfits and why the transport sector saw such a high number of spatial misfits compared to the other sectors. In the next subsection, the assumption that a spatial misfit could be rooted in an EU policy which is not tailor-made for local implementation will be discussed.

6.2.1 The EU factor

Starting with the EU as a factor, even though it is hard to isolate it from the process, an assumption in this research was that spatial misfits could be rooted in the "placeless" EU policy: a policy which is made for the EU member states, without taking into account the peculiarities of each member state. The EU policy creates, according to Contextual Interaction Theory, a structural context for the policy implementation process. In the transport cases, the EU policy is oriented towards economic

development and the functional aspects of transport, but does not take into account the characteristics of the place. Malta's national TEN-T policy must be in line with the EU policy if it is to be eligible for EU funding. However, the EU policy does allow national adjustments to suit the national context as demonstrated in the renewable energy cases. Malta's national policy documents emphasize the environment and the impact of the renewable energy policy on the place to a greater extent than the analysed EU key policy documents. In comparison, the EU aquaculture policy aims not so much at the implementation of aquaculture farms, but instead stresses the market position of aquaculture products. Even though the EU policy emphasises the impact on the environment, it is not very sensitive towards the general characteristics of a place. The analysis indicates that, in all the three policy fields, the EU policy fails to take into account the characteristics of the place. Hence, the "placeless" EU policy could well be a factor in the creation of spatial misfits.

However, this does not mean that the EU is always the most important factor. Nevertheless, it is still remarkable that the transport and renewable energy cases, in policy fields with a strong EU influence, have more spatial misfits than the aquaculture case. Malta had an existing transport policy and road system before its accession to the EU made it subject to EU policy. It is evident that the involvement of the EU changed the characteristics of the key actors: their motivation, cognitions, capacity and power. The EU co-funding of the Trans-European Transport road project, and the short period of availability of the funding was a strong motivator for the government in the transport cases. The government had to report on the course of the implementation to the EU Commission which resulted in the involvement of the Commission. At the same time, the EU co-financing of Birdlife, a non-governmental organization which opposed the road construction projects, created a powerful opposition. In addition an EU parliamentary question damaged the national legitimacy of the project, questioning both the importance of the road projects and their legitimacy.

The renewable energy cases show similarities to the transport cases. Malta had no renewable energy policy and so gradually developed a policy according to the EU guidelines after accession. The EU Commission created a temporal framework for the government and demanded reports about the implementation process of the renewable energy policy, provided technical knowledge and also supported Birdlife projects which made this non-governmental group a powerful actor in the cases. The difference to the transport sector cases is that the EU was not offering wind-park projects-related funds. The government first had to attract foreign investment, and therefore needed consensus and stability. Unlike in the transport and renewable energy cases, EU funding, a time framework and policy were not direct motivations for the government to create an aquaculture zone. The motivation for establishing such a zone came mainly from the national level, with the tourism industry and the environmental lobby being interested in relocating the farms away from the coast in an aquaculture zone.

Our analysis indicates that direct EU project funding, the involvement of and control by the EU commission and the EU parliament, and time pressure are all factors associated with spatial misfits. However, these factors are irresistible in isolation. These EU policies do not force Malta into concrete implementation projects, even though they might provide stimulating conditions. The occurrence of a spatial misfit is only explainable in the context of the national and local governance levels as the EU policy is adjusted to fit these levels.

6.2.2 National level factors

On the national and local levels, we simplified the implementation process and investigated specific actor characteristics in line with the Contextual Interaction Theory: motivation, cognitions, capacity and power. In terms of the motivation of the actors in the three policy fields, it was clear that, in the transport cases, the national governmental actors (excluding the Environment and Planning Authority) and the tourism lobby were highly interested in the road construction. The motivation mainly came from the tourism lobby and the national government. Further, the exclusion of non-governmental actors and the communication that took place through the media hampered a mutual understanding, and this resulted in the cessation of the road projects. The aquaculture case has similarities to the transport cases, with spatial misfits present, even though the EU involvement is weak. The tourism industry and the national government, as well as the environmental lobby, were interested in moving the aquaculture farms to an aquaculture zone further from the coast. Here, land-use conflicts were the main motivation for the government to build the aquaculture zone. Non-governmental actors were excluded by governmental actors, and therefore only aquaculture operators and other stakeholders formed a powerful opposition. As in the transport cases, governmental and non-governmental actors informed each other through the media, an approach which hampered mutual understanding. The government's focus on individual interests combined with the exclusion of actors, led to spatial misfits.

Another factor is the availability of space, or the challenge to clearly defined and protected areas. In the renewable energy cases, Malta did not have the spatial capacity to build a large wind-park without affecting environmental and other interests. Even though the actors were informed during the process, and considered communication to be good and sufficient, the government's focus on economic feasibility and large scale wind-parks in defined and protected areas triggered spatial misfits. Similarities were found in the transport cases. The road projects were planned on protected agricultural and environmental land. In both cases government considered its own unbuilt land, and demarcated and protected areas, as available for construction. This governmental understanding of land use triggered spatial misfits. In comparison, the aquaculture zone was not built in a protected area and showed less spatial misfits.

Overall, it was the national and local level implementation processes that produced the misfits, even though in some cases, and to some extent, these processes were triggered by the goals and resources of the EU policies.

6.3 Spatial misfits in multilevel governance

The phenomenon of misfits in multilevel governance processes is not new and has been observed in several social science fields. We referred, for instance, to the "institutional misfit" and "policy misfit", when considering the incompatibility of EU and national policies, institutions and processes, as well as rules and regulations in the Europeanization literature. However, in our study, we found that the EU policy, institutions and rules do not as such create a spatial misfit. Such misfits are not revealed until the implementation of concrete projects. This might explain why it is not problematic for the EU member states to transpose EU law into national law. For

instance Malta has transposed around 99 per cent of EU laws. The analysis in this study has shown, in the transport and the renewable energy cases, that national governmental and powerful private interests, combined with EU funding and time pressure, and with national interests and the exclusion of certain actors, lead to spatial misfits. That is, the EU factor cannot be isolated from national and local factors. This finding supports other research on the effect of EU policy on national developments (Anderson, 2003; Haverland, 2006).

Another issue raised in the Europeanization literature is that misfits create adaptational pressures and motivate national governments to change. In the renewable energy cases, where the government did not exclude actors from the implementation process, the spatial misfits encouraged the actors to partly align with the policy. However, the transport cases showed that Malta's government did not change transport according to the EU goals, but simply used the policy and EU funding to refurbish and expand their road network and to respond to governmental and private interests. To realize its own national policy goals, the government planned to build on land that was environmentally protected as part of another EU project. This led to a conflict between two EU co-funded projects. The energy cases indicate that the EU renewable energy policy motivated the government to change its energy policy. The EU's time frame and renewable energy target also created a form of pressure. In terms of pressure, the study agrees with the "adaptational pressure" view. However, spatial misfits are not the only motivation, or even a necessity, for change. A fit of EU policy and national policy is not sufficient to explain the outcome of the local implementation process (Schmidt, 2001). National power and capacities, such as a lack of experience and a lack of land, are also decisive in determining the government's focus and priorities and eventually the real implementation of a policy. The renewable energy implementation process in Malta can be characterized as learning-by-doing, and as part of the policymaking process. The aquaculture case demonstrated how Malta's interests in the bluefin tuna industry hampered a change in policy at the EU level.

All five cases, demonstrate how interwoven EU and national policy is. An aspect of multilevel governance is a change in the central state structure and horizontal and vertical shifts of authority. After eight years of EU membership, Malta's governance structure is still very centralised. This central structure is confronted with multilevel EU governance. The transport and renewable energy cases exemplify this phenomenon. Non-governmental actors forced their participation in the closed implementation process by contacting the EU parliament and the EU co-funding agencies in the environmental protection projects. Malta's local interests, and the spatial misfits in the transport cases were lifted up to the EU level. Spatial misfits, originating to an extent from "placeless" EU policies, thus returned to the debate at their place of origin! The renewable energy cases showed a sort of rescaling of the territory: Malta's local scarcity of space to implement a wind-park, and the exclusion of actors, affected the overall EU renewable energy target. The study indicated the interwoven character of the implementation process and the interaction of actors with place, making it impossible to separate the different governance levels and to isolate place from the social interaction of actors during the implementation process.

6.4 Spatial misfits and policy implementation

Having ascertained that spatial misfits are not exclusively rooted in EU policy, but are at most triggered by that level, and are produced by the national and local implementation process, the question as to what spatial misfits mean for the national and local implementation process arises. As explained in Section 2.5, three generations of policy implementation research have recognized certain aspects of a place. This is logical because actors in the implementation process are often somehow related to the place where the policy is implemented or needs to be implemented. Policy both produces and changes places. Despite this, the place concept is rarely mentioned or used as such. By emphasising only some or a single aspect of a place, a holistic understanding is lacking. Linking the characteristics of a place to the policy implementation process involves following the consequences of interaction processes and recognising the mutual influence of place and actors in the implementation process. The analysis of the characteristics of a place does not only help to understand the implementation process, it also helps to better understand the actors.

The study has indicated a relationship between the number of spatial misfits and the course of the implementation process. The analysis has shown that cases with a high number of misfits are not implemented or are still in the process of implementation. This indicates a correlation between the number of spatial misfits and the likelihood of the implementation process ceasing. However, causality has not been verified. Part of the spatial misfit definition is the assumption that, because of it, the policy or measures are inapt and/or inapplicable. This means that policy-implementing actors have three possibilities: first, to implement the policy, risking environmental damage and protests; second, to adjust the policy, and third, not to implement the policy at all. The transport cases exemplified the third option: no implementation. In the renewable energy cases, the implementation process is still on-going. Currently, it seems that the actors are cooperating and seeking a mutual understanding to adjust the policy. For instance, the Environment and Planning Authority is reviewing a Project Description Statement on building a floating wind farm. Here, the alignment of policy needs some additional time. In the aquaculture case, the government simply implemented the policy, but operators have refused to move their farms, and residents are trying to stop the project in court.

In addition, the analysis showed how the place influenced the characteristics of the policy implementation actors. In all five cases non-governmental actors, such as residents, local businessmen and conservation area managers, personally identified themselves with the place. They are part of the place and give the place its meaning. Changing the boundaries of the place means changing personal boundaries, because these are subjects of the place. However, identification with the place is only one aspect. Considering the motivation of actors, we saw that the place influenced interests, goals and objectives. For instance, in one of the transport cases, a beach enlargement motivated the government and the tourist industry to build a new road and, in the aquaculture case, land-use conflicts were the main motivation for building the aquaculture zone. With regard to cognitions, the values that residents bestow upon a place, in the aquaculture case, misfits hampered the willingness to accept new knowledge and to learn. The personal identification with and understanding of, the policy also was related to the values and the boundaries of the place. Finally, the place

influenced the capacity and powers of the actors. For example, due to land scarcity, Malta has a limited capacity to build large-scale wind-parks. This fact makes it difficult for the government to implement the EU policy on renewable energy in the form of a wind-park.

6.5 Lessons from the place

Living in a small island state gives the Maltese people a strong sensibility towards the place. Local boundaries, often invisible to visitors, but are a crucial aspect of identity for Maltese citizens. Functions, such as user rights, are taken for granted by many visitors but are a struggle for transparency and co-determination for many Maltese. Values, often unintelligible for visitors, are a constant compromise between conservation and modernisation, and between integration and exclusion for Maltese citizens. The study shows that EU policy is not placeless. Local goals and interests influence the policymaking and policy implementation that takes place somewhere within the member states. Multilevel governance is a product of creating and blurring geographical and administrative boundaries. The infringement of boundaries, the replacement or abolition of functions, the destruction of nature and changes to values all challenge governance. Place is not just one factor in the policy implementation process. It brings the analytical process back from its isolation and into the real world, whether the focus of the researcher is top-down or bottom up.

A lessoned learnt from this study with regard to the Europeanization literature is that EU policy and law are not powerful enough to determine the form of project implementation regardless of national policy and politics. The EU policy does significantly change the actors' characteristics, their power, their cognition and their motivation. In particular, the time pressure exerted by the EU, the availability of co-funding and the setting of policy targets, push governmental actors to act within a certain timeframe. When confronting a hierarchical and centralised governance structure, this leads to spatial misfits as exemplified in the transport cases. The spatial misfits indicate to the implementing actors that the policy, or the way of implementation, needs to be adjusted according to the local peculiarities. This adjustment needs time, confirming the importance of the actors' cognitions (Bressers & Kuks, 2003; Sabatier, 1988). Thus, severe EU time pressure combined with a hierarchical and centralised governance structure increases the danger that a policy which initially has spatially misfits, is not adjusted in an adaptive implementation process and is not implemented at all. In comparison, in the renewable energy sector, the EU target is more long-term and the non-governmental actors are less excluded from the implementation process than in the other cases. This led to local adjustments being made to the policy. That is, a spatial misfit can lead to adjustments to a policy if the governance structure allows negotiations and bargaining by the actors and stakeholders.

Another lesson has been learnt with regard to the outcome of a policy and its evaluation, that is, the means and the ends of a policy. This is that spatial misfits in policy implementation signal an unsustainable development. The characteristics of place amount to sustainability benchmarks for a policy. The analytical distinction made of four characteristics can function as a holistic instrument to support a sustainable-development-oriented policy evaluation; before, during and after the policy

implementation process. Such an orientation is different from an evaluation that evaluates the precise realization of policy goals and the efficiency. For instance, the transport cases in this study demonstrated that the policy goal of increasing mobility and road safety has to be in harmony with other policies. The sustainability of a policy is currently a vital criterion in evaluating positive or negative impacts of a policy.

Further, the recognition of spatial misfits partially explains why even well formulated and financed policies, supported by governmental officials and stakeholders can still be difficult to implement in a certain place. The concept of place fills a missing link in implementation research that tries to explain the dynamics of policy and actors interaction. Furthermore, the Contextual Interaction Theory has helped to explain how actors in the implementation process understand the characteristics of place and react accordingly. The analyses of actors showed that the actors in the implementation process itself are unaware of a spatial misfit with the place as being a holistic concept. The actors react to single characteristics of the place, such as the adverse impacts on nature, without grasping the complexity of place. Hence, a further lesson that can be learnt from this study is that policy evaluation studies have the responsibility to clarify and simplify complex relationships so that policy implementing actors can better understand and learn from implementation processes.

A practical lesson learnt from this study is that policy instruments, such as Environment Impact Assessments and feasibility studies, which set on to inform all policy implementing actors, will only clarify the impact of a policy if they grasp the complexity of the place. Further, the analysis in this study shows that the use of these instruments also depends on the actors and their characteristics. If governmental actors publish such studies, if actors understand them, and have the capacities to follow suggestions, all have an influence

Finally, the study showed that EU policies still depend on the places of implementation. EU policy cannot be implemented in a sustainable way without local actors who identify themselves with the place. Hence the EU is not supra-territorial: development in the EU depends on the development of places. Theoretically, EU policy can be placeless. The EU law can be transposed into national law without considering the places where future implementation will take place in concrete projects. However, when it comes to actual policy implementation, the interactions of actors illustrate that the actors' characteristics are influenced by the place of living and acting.

Before EU accession, Malta's implementation of policies always concentrated on the enforcement of policy regardless of, for instance, the values of the people, the effects on nature or the functions of a place. However, the people were not conscious of any other way to implement policy, due to their colonial history. Through Malta's independence and then accession to the EU, the Maltese people have started to develop an awareness of the option to defend their relationship with the place where they live. Opposition to a certain policy because of its physical and spatial impact is not always a simple rejection. The analysis in all the cases showed that the opposition is often a questioning of the policy, a demand for adjustments or a request for participation and information. The various cases showed how different the answers to this question can be. Malta can be considered not only as a magnifying glass to reveal the spatial consequences of EU policies, due to high density and the absence of a strong and multi-layered local governance buffer, but also as a sort of future scenario. Urbanization is increasing all over the world and the population of many large cities exceeds Malta's

population. However, most large cities are not islands and can expand into the countryside. Nevertheless, this leads to unsustainable development. The study shows that implementing a policy, and supporting sustainable development, often demands more time, a mutual understanding and a willingness to cooperate, as well as adjustments to fit the place.

References

ADI. (2005). Development of an Aquaculture Zone south-east of Malta off Zonqour Point Marsaskala. Evrionmental Impact Statement. Non Technical Summary (No. PA 00087/04): asspcoates Environmental consultans.

ADT. (2002). Annual Report 2002: Malta Transport Authority.

ADT. (2004). Sustainable land transport. White paper 1994: Malta Transport Authority.

Agius, C. (1999). Strategies for aquaculture development in a small Mediterranean island state: Malta Aquaculture planning in Mediterranean countries (Vol. 43, pp. 41-45). Zaragoza: CIHEAM-IAMZ.

Agnew, J. A. (2010). The Sage handbook of geographical knowledge. London: Sage.

Agnew, J. A., & Duncan, S. J. (Eds.). (1989). The power of place : bringing together geographical and sociological imaginations. London: Unwin Hyman, Ltd.

AIS. (2005). Proposed review of Ghadira road options nodes NA3-NA4: Malta Transport Authority.

Alcoverro, T., Duarte, M., C., Romero, & J. (1995). Annual growth dynamics of Posidonia oceanica: contribution of large-scale versus local factors to seasonality. Marine Ecology Progress Series, 120, 203-210.

Amin, A. (2004). Regions Unbound: Towards a new Politics of Place. Geografiska Annaler: Series B, Human Geography, 86(1), 33-44.

Anderson, J. (2010). Understanding cultural geography : places and traces. London: Routledge.

Anderson, J., Hardy, E., Roach, J., & Witmer, R. (1976). A land use and land cover classification system for use with remote sensor data. Washington: U.S. Government Print.

Anderson, J. J. (2003). Europeanization in Context: Concept and Theory In K. H. F. Dyson & K. H. Goetz (Eds.), Germany, Europe, and the politics of constraint (pp. 37-56). Oxford Oxford University Press

Aquilina, K. (1999). Development planning legislation : the Maltese experience. Msida: Mireva Publications.

Attard, M. (2005). Land transport policy in a small island State-the case of Malta. Transport Policy, 12(1), 23 - 33

Axiak, V., Gauci, V., Mallia, A., Mallia, E., Schembri, P. J., & Vella, A. J. (1998). State of the Environment Report for Malta 1998. Valletta Malta Environment and Planning Authority.

Bache, I., & Flinders, M. V. (2005). Multi-level Governance. Oxford: Oxford University Press.

Balzan, S. (2008, 06-07-2008). Netted. Malta Today.

Barbera, C., Bordehore, C., Borg, J. A., Glémarec, M., Grall, J., Hall-Spencer, J. M., et al. (2003). Conservation and management of northeast Atlantic and Mediterranean maerl beds. Aquatic Conservation: Marine and Freshwater Ecosystems, 13(S1), S65-S76.

Barrett, S., & Fudge, C. (Eds.). (1981). Policy and Action: Essays on the implementation of public policy. London Methuen Inc.

Barrett, S. M. (2004). Implementation Studies: Time for a Revival? Personal Reflections on 20 Years of Implementation Studies. Public Administration, 82(2), 249-262.
BCEOM. (2004). Feasibility and Environmental Impact Studies for Transport Infrastructure Projects in Malta. Final Feasibility Study Report Technical Appendix 1: Malta Transport Authority
BCEOM. (2005a). Feasibility and Environmental Impact Studies for Transport Infrastructure Projects in Malta. Project VIII:Construction of Manikata by-pass: Malta Transport Authority.
BCEOM. (2005b). Feasibility and Environmental Impact Studies for Transport Infrastructure Projects in Malta. Project X: Reconstruction and upgrading of Ghadira Bay Promenade: Malta Transport Authority.
Bemelmans-Videc, M.-L., Rist, R. C., & Vedung, E. (1998). Carrots, sticks & sermons : policy instruments and their evaluation. New Brunswick, N.J., U.S.A.: Transaction Publishers.
Benz, A. (2009). Politik in Mehrebenensytemen. Wiesbaden: VS Verlag fuer Sozialwissenschaften.
Benz, A., & Zimmer, C. (2011). The EU's competences : The 'vertical' perspective on the multilevel system. Hamburg: SUB Hamburg Carl von Ossietzky.
Bernard, N. (2002). Multilevel governance in the European Union. The Hague: Kluwer Law International.
Bill, B. (2003). Maltese responses to tourism. Annals of Tourism Research, 30(3), 581-605.
Birdlife. (2005). Together for birds and people. Position Statement on Wind Farms and Birds Birdlife International.
Birdlife. (2009a). Position Paper on a proposed land based windfarm at Bahrija Birdlife Malta.
Birdlife. (2009b). Position Paper on Sikka l-Bajda proposed offshore windfarm (PA01821/09) and proposed wind monitoring mast (PA00701/09) at Rdum tal - Madonnna SPA/cSAC: Birdlife Malta.
Birdlife. (2009c). Sikka l-Bajda propsed offshore windfarm (PA01821/09) and propsed wind monitoring mast (PA00701/09) at Rdum tal-Madonna SPA/cSAC: Birdlife Malta
Boer, d. C., & Bressers, H. (2011). Complex and dynamic implementation processes: the renaturalization of the Dutch Regge River. Enschede, the Netherlands: University of Twente, in collaboration with the Dutch Water Governance Centre.
Boissevain, J. (1964). Factions, Parties, and Politics in a Maltese Village. American Anthropologist, 66(6), 1275-1287.
Boissevain, J. F. (1996). Saints and Fireworks. Religion and Politics in Rural Malta: Progress Press.
Borg, J., & Inguanez, J. (1993). Malta and the European Community. In S. Busuttil, F. Lerin & L. Mizzi (Eds.), Malta: Food, agriculture, fisheries and the environment (Vol. 7, pp. 145-149). Montpellier: CIHEAM-IAMM.
Borg, J. A., & Schembri, P. J. (2006). Environmental monitoring of tuna-penning activities in Malta. Paper presented at the Offshore Mariculture 2006'.

Borowski, I., Bourhis, J.-P. L., Pahl-Wostl, C., & Barraqué, B. (2008). Spatial Misfit in Participatory River Basin Management: Effects on Social Learning, a Comparative Analysis of German and French Case Studies. Ecology and Society, 13(7).
Börzel, T. A., & Risse, T. (2000). When Europe Hits Home: Europeanization and Domestic Change. Retrieved 18-06-2007, from European Integration online Papers, 4. : http://eiop.or.at/eiop/texte/2000-015a.htm
Brenner, N. (1999). Globalisation as Reterritorialisation: The Re-scaling of Urban Governance in the European Union. Urban Studies, 36(3), 431-451.
Bressers, H. (1994). Beleidsinstrumenten in het beleidsproces. In P. Glasbergen (Ed.), Milieubeleid : een beleidswetenschappelijke inleiding (pp. 125-141). 's-Gravenhage: VUGA.
Bressers, H. (2004). Implementing sustainable development: How to know what works, where, when and how. In W. Lafferty (Ed.), Governance for sustainable development : the challenge of adapting form to function (pp. 284-318). Cheltenham: Edward Elgar.
Bressers, H. (2009). From public administration to policy networks: Contextual interaction analysis. In S. Nahrath & F. Varone (Eds.), Rediscovering Public Law and Public Administration in Comparative Policy Analysis: Tribute to Peter Knoepfel (pp. 123-142). Lausanne: Presses polytechniques et universitaires romandes.
Bressers, H., & Lulofs, K. (2010). Governance and Complexity in Water Management : Creating Cooperation Through Boundary Spanning Strategies. from http://www.UCM.eblib.com/EBLWeb/patron?target=patron&extendedid=P_487434_0&
Bressers, H., & Rosenbaum, W. A. (2003). Achieving sustainable development. Westport, Conn.: Praeger.
Bressers, H. T. A., & Kuks, S. M. (2003). What does governance mean? From conception to elaboration. In H. T. A. Bressers & W. A. Rosenbaum (Eds.), Achieving sustainable development: The challenge of governance across social scales (pp. 65-88). London Praeger.
Bressers, J. T. A., Klok, P.-J., & O'Toole, L. J. (2000). Explaining policy action: A deductive but realistic theory. Paper presented at the IPSA World Congress. Retrieved from http://doc.utwente.nl/5505/
Briguglio, L. (1995). Small island developing states and their economic vulnerabilities. World Development, 23(9), 1615-1632.
Briguglio, M. (2009). Politics, the State and Civil Society–A Theoretical Framework. In J. Cutajar & G. Cassar (Eds.), Social Transitions in Maltese Society (pp. 125-146). Hal Luqa: Agenda.
Brown, J. H., Gillooly, J. F., Allen, A. P., Savage, V. M., & West, G. B. (2004). Toward a Metabolic Theory of Ecology Ecology, 85(7), 1771-1789.
Brown, K. (2003). Integrating conservation and development: a case of institutional misfit. Frontiers in Ecology and the Environment, 1(9), 479-487.
Bulmer, S., & Burch, M. (2005). The Europeanization of UK Government: from Quiet Revolution to Explicit Step-Change? Public Administration, 83(4), 861-890.
Casellas, A., & Galley, C. C. (1999). Regional Definitions in the European Union: A Question of Disparities? Regional Studies, 33(6), 551-558.

Cash, D., et al. (2006). Scale and cross-scale dynamics: governance and information in a multilevel world. from Ecology and society 11(2). http://www.ecologyandsociety.org/vol11/iss2/art8/
Cassar, V., & Bezzina, C. (2005). People must change before institutions can: a model addressing the challenge from administering to managing the maltese public service. Public Administration and Development, 25(3), 205-215.
Claverie, M. (1981). Malta: Renewable Sources of Energy (No. FMR/SC/TER/81/126). Paris: United Nations Educational, Scientificand Cultural Organization.
Coffin, A. W. (2007). From roadkill to road ecology: A review of the ecological effects of roads. Journal of Transport Geography, 15(5), 396-406.
Cowles, M. G., Caporaso, J. A., & Risse-Kappen, T. (2001). Europeanization and Domestic Change: Introduction. In M. G. Cowles, J. A. Caporaso & T. Risse-Kappen (Eds.), Transforming Europe: Europeanization and domestic change (pp. 1-19). New York: Cornell University Press.
Cresswell, T. (1996). In place/out of place geography, ideology, and transgression. from http://public.eblib.com/EBLPublic/PublicView.do?ptiID=310353
Cumming, G. S., Cumming, D. H. M., & Redman, C. L. (2006). Scale Mismatches in Social-Ecological Systems: Causes, Consequences, and Solutions. Ecology and society, 11(1), 14.
de Miño, W. P. H., & Lane, J. C. (1996). STV in Malta: Some surprises. Representation, 34(1), 21-28.
Dear, M. (1992). Understanding and Overcoming the NIMBY Syndrome. Journal of the American Planning Association, 58(3), 288-300.
Debono, J. (2008, 07-12-2008). Four-square behind Gatt's road. Malta Today on Sunday
De Leon, P., & deLeon, L. (2002). What Ever Happened to Policy Implementation? An Alternative Approach. J Public Adm Res Theory, 12(4), 467-492.
Devine-Wright, P. (2005). Beyond NIMBYism: towards an integrated framework for understanding public perceptions of wind energy. Wind Energy, 8(2), 125-139.
Dimech, M., Borg, J. A., & Schembri, P. J. (2002). Changes in the structure of a Posidonia oceanica meadow and in the diversity of associated decapod, mollusc and echinoderm assemblages, resulting from inputs of waste from a marine fish farm (Malta, Central Mediterranean). Bulletin of Marine Science, 71, 1309-1321.
Duncan, J. (2000). Placelessness. In R. J. Johnston, D. Gregory, G. Pratt & M. Watts (Eds.), The dictionary of human geography (pp. 585–586). Oxford: Blackwell.
Dupont, C., & Sciarini, P. (2001). Switzerland and the European integration process: Engagement without marriage. West European Politics, 24(2), 211-232.
EC. (1979). Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild bird, 79/409/EEC.
EC. (1992). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. from European Commission. : http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:NOT
EC. (1996a). Communication from the Commission. Energy for the Future: Renewable Sources of Energy. Green Paper for a Community Strategy, COM/96/0576 final.

EC. (1996b). Decision No 1692/96/EC of the European Parliament and the Council of 23 July 1996 on Community guidelines for the development of the trans-European transport network, 1692/96/EC.
EC. (1997). Communication from the Commission. Energy for the future: renewable sources of energy. White paper for a community strategy and action plan, COM(97)599 final.
EC. (1999). 1999 Regular Report from the Commission on Malta's Progress Towards Accession. Retrieved 17.02.2011, from European Commission http://ec.europa.eu/enlargement/archives/pdf/key_documents/1999/malta_en.pdf.
EC. (2001). Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001on the promotion of electricity produced from renewable energy sources in the internal electricity market, 2001/77/EC.
EC. (2001b). European Governance, a white paper: European Commission.
EC. (2001c). White Paper- European transport policy for 2010: time to decide: Europenan Commission.
EC. (2002a). Consolidated Version of the Treaty Establishing the European Community C 325/33.
EC. (2002b). A Strategy for the Sustaianble Development of European Aquaculture (No. COM(2002) 511 final. Brussels: European Commission.
EC. (2003). Treaty concerning the accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic to the European Union from http://www.europarl.europa.eu/enlargement_new/treaty/default_en.htm.
EC. (2004a). Decision No 884/2004/EC of the European Parliament and of the Counicil of 29 April 2004 amending Decision No 1692/96/EC on Community guidelines for the development of the trans-European transport network, No 884/2004/EC.
EC. (2004b). Decision No 884/2004/EC of the European Parliament and the Council of 29 April 2004 amending Decision No 1692/96/EC on Community guidelines for the development of the trans-European transport network, 884/2004/EC.
EC. (2006). Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999, 1083/2006.
EC. (2007). Status Report 2006 (No. EU22752EN): Institute for Environment and Sustainability Communication from the Commission. Renewable Energy Road Map Renewable energies in the 21st century: building a more sustainable future., COM(2006) 848 final.
EC. (2008a). Instrument for Structural Policies for Pre-Accession. Retrieved 17.02.2011, from European Commission http://ec.europa.eu/regional_policy/funds/ispa/ispa_en.htm#intro.
EC. (2008b). Photovoltaic Geographical Information System (PVGIS). Geographical Assessment of Solar Resource and Performance of Photovoltaic Technology. Retrieved 5.6.2010, from European Commission http://re.jrc.ec.europa.eu/pvgis/index.htm.

EC. (2009a). Building a sustainable future for aquaculture. A new impetus for the Strategy for the Sustainable Development of European Aquaculture (No. COM(2009) 162 final): European Commission.
EC. (2009b). Commission Regulation (EC) No 710/2009 of 5 August 2009 amending Regulation (EC) No 889/2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007, as regards laying down detailed rules on organic aquaculture animal and seaweed production, (EC) No 710/2009 C.F.R. (2009b).
EC. (2009c). Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, 2009/28/EC.
EC. (2010a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Comittee and the Committee of the Regions: Energy 2020. A strategy for competitive, sustainable and secure energy, l{SEC(2010) 1346}.
EC.(2010b). Decision No 661/2010/EU of the European Parliament and the Council of 7 July 2010 on Union guidelines for the development of the trans-European transport network, No 661/2010/EU.
EC. (2011a). Regulation (EU) No 304/2011 of the European Parliament and of the Council of 9 March 2011amending Council Regulation (EC) No 708/2007 concerning use of alien and locally absent species in aquaculture, (EU) No 304/2011.
EC. (2011b). Renewable makes the difference., Luxembourg: Office for Official Publications of the European Communities.
EC. (2011c). TEN-T road implementation in Malta. In J.R.Kotzebue (Ed.): European Commission Directorate Regional Policy Italy, Malta, Portugal, Spain. Italy and Malta Acting Head of Unit.
Eckstein, H. (1997). Congruence Theory Explained. from UC Irvine: Center for the Study of Democracy.
Ecoserv. (2007). Azzopardi Fisheries Tuna-Penning Project Benthic Monitoring Programme. Report on the eleventh monitoring session: April 2006. Mosta ecoserv Ltd.
EEA. (2008). Climate for a transport change.Term 2007: indicators tracking transport and environment in the European Union (No. No 1/2008): European Environment Agency.
EEA. (2011). NEC Directive status report 2010 (No. 3/2011): European Environment Agency.
Enemalta. (2006). Enemalta Corporation Electricity Generation Plan 2006 – 2015. Retrieved from http://www.enemalta.com.mt/enemaltastorage/images/files/archived%20news/generation%20plan%20%2821.06.06%29.pdf.
Enemalta. (2010). EU Funding Retrieved 05/07/2010, from Enenmalta http://www.enemalta.com.mt/index.aspx?cat=1&art=118&art1=175.
EU. (1986). The Single European Act.
EUcom. (2007). MALTA – Renewable Energy Fact Sheet. Retrieved 05/08/2011, from European Commission

http://ec.europa.eu/energy/energy_policy/doc/factsheets/renewables/renewables_mt_en.pdf.
EUcom. (2010a). Investing in Europe's future European. Fifth report on economic, social and territorial cohesion. Luxembourg: European Comission.
EUcom. (2010b). Wind energy developments and Natura 2000: European Commission.
EUcom. (2011). Overview of the secondary EU legislation (directives and regulations) that falls under the legislative competence of DG ENER and that is currently in force. Retrieved 03/08/2011, from European Commission http://ec.europa.eu/energy/doc/energy_legislation_by_policy_areas.pdf.
EUcouncil. (1985). European Charter of Local Self-Government (1985).
Eurostat. (2011a). Population at 1 January. Retrieved 16.11.2011, from Eurostat: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=tps00001&tableSelection=1&footnotes=yes&labeling=labels&plugin=1.
Eurostat. (2011b). Transposition of EU law, by policy area. Retrieved 28.02.2012, from Eurostat: http://dict.tu-chemnitz.de/dings.cgi?lang=en&service=deen&opterrors=0&optpro=0&query=prozent+&iservice=&comment=&email=.
Eurostat. (2012a). County Profiles Cyprus. Retrieved 16.01.2012, from Eurostat: http://europa.eu/about-eu/countries/member-countries/cyprus/index_en.htm.
Eurostat. (2012b). County Profiles Malta. Retrieved 20.1.2012, from Eurostat: http://europa.eu/about-eu/countries/member-countries/malta/index_en.htm.
Faludi, A. (2006). From European spatial development to territorial cohesion policy. Regional Studies, 40(6), 667-678.
FAO (Producer). (2011, 14.8.2011) National Aquaculture Sector Overview Anual Reports. retrieved from http://www.fao.org/fishery/countrysector/naso_malta/en.
Farrugia, R. N., Fsadni, M., & Yousif, C. (2005). The Renewable Energy Potential of the Maltese Islands. Xjenza 10, 32-42.
Fischer, F. (2004). Beyond empiricism: policy analysis as deliberative practice In M. Hajer (Ed.), Deliberative policy analysis understanding governance in the network society. Cambridge [u.a.: Cambridge Univ. Press.
Forman, R. T. T. (2003). Road ecology : science and solutions. Washington, DC [u.a.: Island Press.
Forman, R. T. T., & Alexander, L. E. (1998). Roads and Their Major Ecological Effects. Annual Review of Ecology and Systematics, 29(ArticleType: research-article / Full publication date: 1998 / Copyright © 1998 Annual Reviews), 207-C202.
Gacia, E., & Duarte, C. M. (2001). Sediment Retention by a Mediterranean Posidonia oceanica Meadow: The Balance between Deposition and Resuspension. Estuarine, Coastal and Shelf Science, 52(4), 505-514.
Galea, K. (2008, 03-09-2008). Minister always acted correctly. Malta Today.
Gieryn, T. (2000). A Space for Place in Sociology. Annual Review of Sociology, 26(1), 463-496.
Goggin, M. L., Bowman, A. O. M., Lester, J. P., & O'Toole, J. L. J. (1990). Implementation Theory and Practice: Toward a Third Generation: Scott, Foresman/Little, Brown Higher Education.
Gov. (1964). Constitution of Malta Act. from Government of Malta. : http://www.legal-malta.com/law/constitution-7.htm.

Gov. (1977). Enemalta Act Cap. 272 Cong. Rec.(1977).
Gov. (1992). Development Planning Act (1992).
Gov. (1993). Local Councils Act 363 Cong. Rec.(1993).
Gov. (2000a). Malta Resources Authority Act(2000a).
Gov. (2000b). Malta Transport Authority Act(2000b).
Gov. (2001a). Fisheries conservation and management act (2001a).
Gov. (2001b). Malta Council for Economic and Social Development Act CAP. 431. Cong. Rec.(2001b).
Gov. (2005). A Once-Only Grant on the Purchase of Electric-powered Cars and Solar Heating Energy Savers for Domestic Use, 203 Cong. Rec.(2005).
Gov. (2006). A Once-Only Grant on the Purchase of Photovoltaic Systems for Domestic Use and on the Purchase of Thermal Roof Insulation Materials for Roofs of Domestic Residences, 135 Cong. Rec.(2006).
Gov. (2007). Malta's National Strategic Plan for Fisheries 2007-2013. from Ministry for Resources and Rural Affairs: http://ec.europa.eu/fisheries/cfp/eff/national_plans/index_en.htm.
Gov. (2008). Office of the Prime Minister Retrieved 05/02/2008, from Government of Malta.
Gov. (2009). ACT No. XV of 2009. Authority for Transport in Malta Government of Malta (2009).
Gretchen, K. (2003). Managing the impersonal in a personalized public service. Public Administration and Development, 23(2), 197-209.
Griet De Ceuster, et al. (2010). Final Report: Trans-European transport network planning methodology: Transport and Mobility Leuven.
GTZ. (1998). Master Plan for the Roads of Malta and Gozo Deutsche Gesellschaft fuer Technische Zusammenarbeit GmbH.
Haverland, M. (2006). Does the EU cause domestic developments? improving case selection in Europeanisation research. West European Politics, 29(1), 134-146.
Haverland, M., & Romeijn, M. (2007). DO MEMBER STATES MAKE EUROPEAN POLICIES WORK? ANALYSING THE EU TRANSPOSITION DEFICIT. Public Administration, 85(3), 757-778.
Hill, M. J., & Hupe, P. L. (2002). Implementing public policy: governance in theory and practice: SAGE.
Hirczy, W. (1995). Explaining near-universal turnout: The case of Malta. European Journal of Political Research, 27(2), 255-272.
Hix, S. (1998). The study of the European Union II: the 'new governance' agenda and its rival. Journal of European Public Policy, 5(1), 38-65.
Hofstede, G. (2001). Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations. London: Sage.
Holloway, I. (2004). Basic concepts for qualitative research. Oxford: Blackwell science.
Holmer, M. (2010). Environmental issues of fish farming in offshore waters: perspectives, concerns and research needs. Aquaculture Environment Interactions, 1(1), 57-70.
Hooghe, L. (1996). Reconciling EU- Wide Policy and National Diversity. In L. Hooghe (Ed.), Cohesion Policy and European Integration:Buidlidn Muliti-Level Governance (pp. 1-24). Oxford Oxford University Press.

Howitt, R. (1998). Scale as relation: musical metaphors of geographical scale. Area, 30(1), 49-58.
Hsieh, H.-F., & Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. Qualitative Health Research, 15(9), 1277-1288.
Hupe, P. L., & Hill, M. J. (2006). The Three Action Levels of Governance: Re-framing the Policy Process Beyond the Stages Model. In B. G. Peters & J. Pierre (Eds.), Handbook of public policy London: Sage Publications.
IAUS. (1992). Environmental Impact Statement. Stirling Institute of Aquaculture University of Stirling.
Jachtenfuchs, M. (2001). The Governance Approach to European Integration. Journal of Common Market Studies, 39(2), 245-264.
Jessop, B. (2008). Institutions and institutionalism in political economy: a strategic-relationship approach In B. G. Peters, J. Pierre & G. Stoker (Eds.), Debating institutionalism (pp. 210-231). Manchester: Manchester University Press.
Johnston, R. J., Gregory, D., Pratt, G., & Watts, M. (2000). Dictionary of human geography. New York: Free Press.
Keating, M. (1997). The invention of regions: political restructuring and territorial government in Western Europe. Environment and Planning C: Government and Policy, 15(4), 383-398.
Kellert, S. R. (2005). The Biological Basis for Human Values of Nature.
King, G., et al. (1994). Designing social inquiry scientific inference in qualitative research. from http://site.ebrary.com/id/10035824.
King, R. (1979). Recent Developments in the Political and Economic Geography of Malta. Tijdschrift voor economische en sociale geografie, 70(5), 258-271.
Knill, C. (1998). The Impact of National Administrative Traditions. Journal of Public Policy. Journal of Public Policy, 18, 1-28.
Knill, C., & Lehmkuhl, D. (1999). How Europe Matters. Different Mechanisms of Europeanization. Retrieved 15-05-2007, from European Integration online Papers Vol. 3 (1999) N° 7: http://eiop.or.at/eiop/texte/1999-007a.htm.
Kohler-Koch, B. (2003). Interdependent European Governance. In B. Kohler-Koch (Ed.), Linking EU and National Governance (pp. 10-23). Oxford Oxford University Press
Kohler-Koch, B., & Eising, R. (1999). The transformation of governance in the European Union. from http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=97984.
Krippendorff, K. (2005). Content analysis : an introduction to its methodology. Thousand Oaks; London; New Delhi: Sage.
Ladenburg, J., & Dubgaard, A. (2009). Preferences of coastal zone user groups regarding the siting of offshore wind farms. Ocean & Coastal Management, 52(5), 233-242.
Lampinen, R., & Uusikylä, P. (1998). Implementation Deficit — Why Member States do not Comply with EU directives? Scandinavian Political Studies, 21(3), 231-251.
Larsen, J. H. M., et al. (2005). Experiences from Middelgrunden 40 MW Offshore Wind Farm. Paper presented at the Copenhagen Offshore Wind. Retrieved from http://www.middelgrunden.dk/middelgrunden/sites/default/files/public/file/Artikel%20Copenhagen%20Offshore%207%20Middelgrund.pdf.

Lascoumes, P., & Le Gales, P. (2007). Introduction: Understanding Public Policy through Its Instruments—From the Nature of Instruments to the Sociology of Public Policy Instrumentation. . Governance, 20(1), 1-21.
Lipsky, M. (1980). Street-Level Bureaucracy: Dilemmas of the Individual in Public Services. New York: Russell Sage Foundation.
Louw, E., & Bruinsma, F. (2006). From mixed to multiple land use. Journal of Housing and the Built Environment, 21(1), 1-13.
Lundin, M. (2007). Explaining Cooperation: How Resource Interdependence, Goal Congruence, and Trust Affect Joint Actions in Policy Implementation. Journal of Public Administration Research and Theory, 17(4), 651-672.
Mackie, J. L. (1980). The cement of the universe; a study of causation. Oxford: Clarendon Press.
Majone, G. (1989). Evidence, argument and persuasion in the policy process. New Haven: Yale University Press.
Maller, C., et al. (2006). Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations. Health Promotion International, 21(1), 45-54.
MARA. (2010). Grant for the Purchase of Photovoltaic Systems in the Domestic Sector (2010).
Marks, G., Fritz, W. S., Schmitter, P. C., & Steek, W. (1996). Governance in the European Union. London: Sage Publications Ltd.
Marks, G., Hooghe, L., & Blank, K. (1996). European Integration from the 1980s: State-Centric v. Multi-level Governance*. JCMS: Journal of Common Market Studies, 34(3), 341-378.
MARRA. (2011). A Grant for the Purchase Solar Water Heaters in the Domestic Sector - Amendment to the Scheme 305 Cong. Rec.(2011).
Marston, S. A. (2000). The social construction of scale. Progress in Human Geography, 24(2), 219-242.
Marthe Narud, H., & Strøm, K. (2000). Adaptation without EU membership: Norway and the European Economic Area. The Journal of Legislative Studies, 6(1), 125-150.
Massey, D. (1991). The political place of locality studies. Environment and Planning A, 23(2), 267-281.
Mayntz, R. (1983). Implementation von regulativer Politik. In R. Mayntz (Ed.), Implementation politischer Programme II (pp. 50-74). Opladen: Westdeutscher Verlag
McDonnell, L. M., & Elmore, R. F. (1987). Getting the Job Done: Alternative Policy Instruments. Educational Evaluation and Policy Analysis, 9(2), 133-152.
McGarigal, K., & Marks, B. J. (1995). Fragstats : Spatial pattern analysis program for quantifying landscape structure. Portland, Oregon: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.
McLaughlin, M. W., & Elmore, R. F. (1982). Implementation of Federal Education Programs: Implications for Future Federal Policy. Peabody Journal of Education, 60(1), 8-19.
MCST. (2008). The Malta Council for Science and Technology (MCST). Retrieved 20-10-2008, from http://www.mcst.org.mt/page.aspx?id=37.

Meli, A. (1993). Overview of Agricultural Land Use in Malta (No. 1016-121X). Montpellier: CIHEAM-IAMM.
MEPA. (1992). Structure plan for the Maltese Islands Malta Environment and Planning Authority.
MEPA. (2002). Costal Strategy Topic Paper Valletta Malta Environment and Planning Authorty.
MEPA. (2003). Transport Topic Paper Malta Environment and Planning Authority.
MEPA. (2005a). Case Officer Report. Case Number: PA/00087/04. Retrieved from http://www.mepa.org.mt/SearchPA.
MEPA. (2005b). Public Hearing Meetings with Stakeholders: Malta Environment and Planning Authority
MEPA. (2006). North West Local Plan: Malta Environment and Planning Authority
MEPA. (2007). Development Control Policy and Design Guidance 2007. Marsa: Malta Environment and Planning Authority
MEPA. (2008). Organisational Structure Retrieved 2008, from Malta Environment and Planning Authority: http://www.mepa.org.mt/index.htm?organisation/boards_committees/DCcommittees_mainpage.htm&1.
MEPA. (2009a). Proposals concerning the Re-routing/ubgrading of Ghadira Road Malta Environment and Plannning Authority
MEPA. (2009b). Scoping Comments submitted to MEPA PA 01819/09 (GFE 00002/09) Outline application for wind farm and installation of a temporary wind monitory mast Site at, Wied Rini, Bahrija, Rabat: Malta Environment and Planning Authority.
MEPA. (2009c). Scoping Comments submitted to MEPA PA 01821/09 (GFE 0012/08): Outline application for wind farm including laying of power cables between turbines. Offshore Sikka l-Bajda, L/O Mellieha: Malta Environment and Planning Authority.
MEPA. (2009d). Scoping Meeting with Stakeholders PA 01819/09: Outline application for wind farm and installation of a temporary wind monitory mast Site at, Wied Rini, Bahrija, Rabat: Malta Environment and Planning Authority.
MEPA. (2010). Public Attitudes Survey 2008: Analysis of results: Malta Environment and Planning Authority.
Miles, M. B., & Huberman, A. M. (1999). Qualitative data analysis : an expanded sourcebook. Thousand Oaks, Calif. [u.a.]: Sage.
MinRAE. (2003). Malta Centre for Fisheries Sciences. Retrieved 2008, from Ministy for Rual Affairs and the Environment http://www.maltafisheries.gov.mt/mcfs_aquaculture_history.htm.
Mitchell, J. P. (1998). An Island in between: Malta, Identity and Anthropology. South European Society and Politics, 3(1), 142-149.
MMD. (2005a). Strategy for renewable energy exploitation in Malta: Draft final volume 2. Policy options review Mott McDonald.
MMD. (2005b). Strategy for renewable energy exploitation in Malta: Volume 1 Renewable electricity target Mott McDonald.
Morata, F., & Munoz, X. (1996). Vying for European Funds: Territorial Restructuring in Spain. In L. Hooghe (Ed.), Cohesion Policy and European Integration: Building Muliti-Level Governance (pp. 195-218). Oxford: Oxford University Press.

Morse, J. M. (1994). Designing funded qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 220-235). Thousand Oaks: Sage Publications.
MPDC. (2011). Project Description Statement concerning the proposed Floating Wind Farm, Maltese Islands MD&DC.
MRA. (2007). Malta Resources Authority Annual Report 2006 - 2007: Malta Resource Authority.
MRRA. (2004). Project Description Statement. PA 00087/04 Development of an Aquaculture Zone South-East of Malta Ministry for Resources and Rural Affairs.
MRRA. (2006). A Draft Renewable Energy Policy for Malta. Malta: Ministry for Resources and Rural Affairs, Government Press.
MRRA. (2007a). Malta Fisheries Operational Programme (2007-2013). Retrieved from http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/801&type=HTML.
MRRA. (2007b). Malta's National Strategic Plan For Fisheries 2007-2013. from Ministry for Resources and Rural Affairs.: http://ec.europa.eu/fisheries/cfp/eff/national_plans/list_of_national_strategic_plans/malta_en.pdf.
MRRA (2008). Aquaculture Operations Regulations, 2008.
MRRA. (2009a). A proposal for a land based wind farm at Wied Rini l/o Bahrija. Project Description Statement Ministry for Resources and Rural Affairs.
MRRA. (2009b). A Proposal for an Energy Policy for Malta. Malta: Ministry for Resources and Rural Affairs, Government Press.
MRRA. (2009c). A proposal for an offshore windfarm at Is-Sikka L-Bajda. Project Description Statement Ministry for Resources and Rural Affairs.
MRRA. (2010a). Malta's National Renewable Energy Action Plan as required by Article 4(2) of Directive 2009/28/EC: Ministry for Resource and Rural Affairs.
MRRA. (2010b). Ministry for Resources and Rural Affairs. Retrieved 16-08-2011, from Ministry for Resources and Rural Affairs: http://www.mrra.gov.mt/page.aspx?id=73.
MRRA. (2011). Aquaculture Operations Regulations, 2011.
Muscat, J. (2005). Motivation within the Malta Environment and Planning Authority Universty of Malta Valletta.
Nanetti, R. Y. (1996). EU Cohesion and Territorial Restructuring in the Member States In L. Hooghe (Ed.), Cohesion Policy and European Integration:Building Muliti-Level Governance (pp. 59-88). Oxford Oxford University Press.
NAO. (2011). Performance Audit Renewable Energy in Malta Follow-up. Valletta National Audit Office.
Nash, R. (1982). Wilderness and the American mind. New Haven, Conn.: Yale University Press.
NSO. (2001). Census of Agriculture 2001. Valletta National Statistic Office Malta.
NSO. (2002). Tourism 2002- An Overview. from National Statistic Office Malta. : http://www.nso.gov.mt/statdoc/document_file.aspx?id=237.
NSO. (2006). Labour force survey Valletta National Statistic Office Malta.
O'Neill, J. (2003). The varities of Intrinsic Values. In A. Light & H. Rolston (Eds.), Environmental ethics: an anthology (pp. 131-143). Oxford: Blackwell Publishers Ltd.

O'Toole Jr, L. J. (2005). Interorganizational Relations in Implementation Handbook of Public Administration (pp. 234-244). London: Sage Publications Ltd.
O'Toole, L. J. (2004). The Theory–Practice Issue in Policy Implementation Research. Public Administration, 82(2), 309-329.
Odum, E. P. (1969). The strategy of ecosystem development. Science, 164, 262-270.
Ostrom, E. (2005). Understanding institutional diversity New Jersey: Princeton University Press.
OUP. (2012). Oxford Dictionaries. Retrieved 20.01.2012, from Oxford University Press: http://oxforddictionaries.com.
Paasi, A. (1991). Deconstructing regions: notes on the scales of spatial life. Environment and Planning A, 23(2), 239-256.
Paasi, A. (2002). Place and region: regional worlds and words. Progress in Human Geography, 26(6), 802-811.
Pedersen, E., et al. (2009). Response to noise from modern wind farms in The Netherlands. Journal of the Acoustical Society of America, 126(2), 634-643.
Peregin, C. (2010, 23.05.2010). Underwater cave find threatens wind farm. Impact assessment 'in coming weeks'. The Sunday Times Retrieved from http://www.timesofmalta.com/articles/view/20100523/local/underwater-cave-find-threatens-wind-farm.308566.
Peters, B. G., & Pierre, J. (2001). Developments in intergovernmental relations: towards multi-level governance. Policy & Politics, 29(2), 131-135.
Peters, B. G., & Pierre, J. (2005). Multi-level Governance and Democracy: A Faustian Bargain? In I. Bache & M. V. Flinders (Eds.), Multi-level Governance (pp. 75-89). Oxford: Oxford University Press.
Peters, B. G., et al. (2008). The promise and performance of institutional analysis: conclusions. In B. G. Peters, J. Pierre & G. Stoker (Eds.), Debating institutionalism (pp. 232-240). Manchester: Manchester University Press.
Petersen, J. K., & Malm, T. (2006). Offshore Windmill Farms: Threats to or Possibilities for the Marine Environment. AMBIO: A Journal of the Human Environment, 35(2), 75-80.
Pirotta, G. A. (1997). Politics and public service reform in small states: Malta. Public Administration and Development, 17(1), 197-207.
Pitta, P., Apostolaki, E. T., Giannoulaki, M., & Karakassis, I. (2005). Mesoscale changes in the water column in response to fish farming zones in three coastal areas in the Eastern Mediterranean Sea. Estuarine, Coastal and Shelf Science, 65(3), 501-512.
Pol, E., Di Masso, A., Castrechini, A., Bonet, M. R., & Vidal, T. (2006). Psychological parameters to understand and manage the NIMBY effect. Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology, 56(1), 43-51.
Pressman, J. L., & Wildavsky, A. B. (1973). Implementation : how great expectations in Washington are dashed in Oakland. London: University of California Press, Ltd.
Priemus, H. (2000a). Meervoudig ruimtegebruik : stimulansen en belemmeringen. Delft: Delft University Press.
Priemus, H. (2000b). Meervoudig ruimtegebruik : stimulansen en belemmeringen. Delft: Delft University Press.
PV-NMS-NET. (2009). Supporting Development of Photovoltaics in the EU New Member States Network. Retrieved 02.09.2011, from PV-NMS-NET:

http://www.pv-nms.net/pvnms/web/wfrontend.php/article?article=yes&id=70&rootMenuItem=67&path1=MENU&path2=About+the+Network&path3=Introduction.
Pye, K., & Blott, S. J. (2009). Coastal Geomorphological Changes at Ghadira Beach (Mellieha Bay). Malta: Scoping Study Report. Crowthorne: Kenneth Pye Associates Ltd.
Ragin, C. C. (1989). The comparative method moving beyond qualitative and quantitiative strategies. Berkeley, CA [etc.]: University of California Press.
Relph, E. C. (1976). Place and placelessness. London: Pion.
Remo, Z. (1990). The maltese electoral system and its distorting effects. Electoral Studies, 9(3), 205-215.
REPRO-DOTT. (2005). Final Report. Reproduction of the Bluefin Tuna in Captivity - feasibility study for the domestication of Thunnus thynnus (No. Q5RS-2002-0153). Madrid Instituto Espanol de Oceanografia.
Rodenburg, C. (2002). Multifunctional land use in the city. Amsterdam: Vrije Universiteit.
Rodenburg, C., & Nijkamp, P. (2002). Evaluation of multifunctional land use : design and application of policy criteria. Amsterdam: Vrije Universiteit.
Rokeach, M. (1972). Beliefs, Attitudes and Values: A Theory of Organization and Change San Francisco: Jossey-Bass Inc., Publishers.
Rokeach, M. (Ed.). (2000). Understanding Human Values: Individual and Societal. New York Free Press.
Rolston, H. (2003). Value in Nature and the Nature of Values In A. Light & H. Rolston (Eds.), Environmental ethics: an anthology (pp. 143-153). Oxford: Blackwell Publishers Ltd.
Sabatier, P. A. (1988). An advocacy coalition framework of policy change and the role of policy-oriented learning therein. Policy Sciences, 21(2), 129-168.
Sabatier, P. A. (1991). Toward Better Theories of the Policy Process. PS: Political Science and Politics, 24(2), 147-156.
Sabatier, P. P. A. (Ed.). (1999). Theories of the policy process. Boulder: Westview Press.
Sabatier, P. P. A., & Mazmanian, D. A. (Eds.). (1981). Effective Policy Implementation. Toronto: Lexington Books.
Sack, R. D. (1997). Homo geographicus : a framework for action, awareness, and moral concern. London: The Johns Hopkins University Press.
Sack, R. D. (2001). The geographic problematic: empirical issues. Norsk Geografisk Tidsskrift - Norwegian Journal of Geography, 55(3), 107 - 116.
Saetren, H. (2005). Facts and Myths about Research on Public Policy Implementation: Out-of-Fashion, Allegedly Dead, But Still Very Much Alive and Relevant. Policy Studies Journal, 33(4), 559-582.
Salamon, L. M. (2002). The new governance and the tools of public action: an introduction. In L. M. Salamon & O. V. Elliott (Eds.), The tools of government : a guide to the new governance (pp. 1-28). New York: Oxford University Press.
Schiavone, H. (1988). Possibilities for the development of aquaculture in Malta. University of Malta Valletta.
Schmidt, V. A. (2001). Europeanization and the mechanism of economic policy adjustment. Vienna: European Community Studies, Association-Austria.

Scholte, J. A. (2008). Defining Globalisation. World Economy, 31(11), 1471-1502.
Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. Journal of Personality and Social Psychology, 53(3), 550-562.
Sciberras, M., et al. (2009). Habitat structure and biological characteristics of a maerl bed off the northeastern coast of the Maltese Islands (central Mediterranean). Marine Biodiversity, 39(4), 251-264.
Scicluna, E., & Aguis, C. (2006). An Independent Evaluation of the Environmental Impact Statement regarding the proposed Development of an Aquaculture Zone South -West of Malta off Zonqor Point, Marsaskala Malta Aquaculture Producers Association.
Scriven, M. (1976). Maximizing the power of causal investigations: The modus operandi methods. In G. V. Glass (Ed.), Evaluation Studies Review Annual (Vol. 1, pp. 101-119). London: Sage.
Smith, N. (2008). Uneven development : nature, capital, and the production of space. Athens: University of Georgia Press.
Solair. (2003). Solar research program at the Austrian-Maltese research center (AMRC) in Marsaxlokk, Island Malta: Target GmbH.
Soper, K. (2000). What is nature?: culture, politics and the non-human Oxford Blackwell-Publishers Ltd.
Spillane, J. P., et al. (2002). Policy Implementation and Cognition: Reframing and Refocusing Implementation Research. Review of Educational Research, 72(3), 387-431.
Stewart, G. B., S., P. A., & Coles, C. F. (2007). Poor evidence-base for assessment of windfarm impacts on birds. Environmental Conservation, 34(01), 1-11.
Suri, M., et al. (2004). Regional Differences of the Electricity Production in EU 25 Countries Ispra: DG Joint Research Centre, Institute for Environment and Sustainability, Renewable Energies Unit.
Switalski, T., et al. (2004). Benefits and impacts of road removal. Frontiers in Ecology and the Environment, 2(1), 21-28.
Thomsen, F., et al. (2006). Effects of offshore wind farm noise on marine mammals and fish COWRIE Ltd.
TINA. (2002). TINA Transport infrastructure needs assessment for Malta. Final Report European Community, Malta Government, TINA Vienna.
Van Meter, D. S., & Van Horn, C. E. (1975). The Policy Implementation Process: A Conceptual Framework. Administration Society (6), 445-488
Vassallo, R. (2008a, 24-09-2008). From ghost ship to phantom firm: Malta's tuna exports get fishier by the minute. Malta Today. Retrieved from http://archive.maltatoday.com.mt/2008/09/24/t12.html.
Vassallo, R. (2008b, 12.11.2010). Malta the worst offender for tuna ranching infringements in 2010. Malta Today. Retrieved from http://www.maltatoday.com.mt/news/national/malta-the-worst-offender-for-tuna-ranching-infringements-in-2010%E2%80%A8.
Vassallo, R. (2008c, 31-08-2008). Two 'phantom farms' among Malta's official tuna ranches. Malta Today. Retrieved from http://archive.maltatoday.com.mt/2008/08/31/t9.html.

Warrington, E. (1998). Introduction: Gulliver and Lilliput in a new world order: The impact of external relations on the domestic policies and institutions of micro-states. Public administration and development, 18(2), 101-106.
Weber, R. P. (1990). Basic content analysis. Newbury Park: Sage Publications.
Williams, R. M., Jr. (2000). Change and Stability in Values and Value Systems: A sociological perspective In M. Rokeach (Ed.), (pp. 15-46). New York Free Press.
Wilson, J., et al. (1999). Scale misperceptions and the spatial dynamics of a social-ecological system. Ecological Economics, 31(2), 243.
Wolch, J. J., & Dear, J. M. (1989). The power of geography : how territory shapes social life. In J. J. Wolch & J. M. Dear (Eds.), The power of geography : how territory shapes social life (pp. 3-18). London Unwin Hyman Ltd.
Wolsink, M. (2000). Wind power and the NIMBY-myth. Institutional capacity and the limited significance of public support. Renewable Energy, 21(1), 49 - 64.
Wright, J. C., et al. (1986). Social status in small groups: Individual–group similarity and the social "misfit.". Journal of Personality and Social Psychology, 50(3), 523-536.
Yin, R. K. (2002). Case study research : design and methods. Beverly Hills, Calif.: Sage Publications.
Young, O. R. (2002). The Institutional Dimension of Environmental Change: Fit, Interplay, and Scale. Massachusetts Massachusetts Institute of Technology.
Young, O. R. (2003). Environmental Governance: The Role of Institutions in Causing and Confronting Environmental Problems. International environmental agreements: Politics Law and Economics 3(4), 377-393.
Yousif, C. I. (2002). Recent developments of applying solar photovoltaic technologies in Malta Paper presented at the Enemalta 25th Anniversary Conference on Energy Efficiency.
Zammit, A. (2009). Sociology and the Environment. In J. Cutajar & G. Cassar (Eds.), Social Transitions in Maltese Society (pp. 303-328). Hal Luqa: Agenda.

Summary in Dutch

Inleiding

Het omzetten van Europese regels in nationale wet- en regelgeving is voor de meest Europese lidstaten geen probleem. Rond 99 procent van de Europese regelgeving is omgezet in de nationale wetgeving. De daadwerkelijke implementatie van Europees beleid is echter wel problematisch. Het grootschalige of grensoverschrijdende Europees beleid is vaak niet toegesneden op de plaatselijke implementatie wat tot ruimtelijke "misfits" (ongepastheden) leidt. Dit onderzoek definieert ruimtelijke "misfits" als een incongruentie tussen het beleid en de karakteristieke kenmerken van een plaats, zoals de grenzen, de natuur, de belangrijke functies en de culturele en andere waarden. Door deze incongruentie worden maatregelen ongeschikt en/of niet toepasbaar in de praktijk. De rechtstreekse plaatselijke implementatie van zulk beleid kan significante negatieve effecten hebben op die plaats en de duurzame ontwikkeling op die plek negatief beïnvloeden. Niettemin lijkt het Europees beleid zo invloedrijk dat nationale overheden er soms desalniettemin voor kiezen om het beleid zonder plaatselijke aanpassingen te implementeren.

Malta is de kleinste en meest dichtbevolkte lidstaat van de Europese Unie (EU). Zo is de bevolkingsdichtheid er drie keer hoger dan in Nederland. Hierdoor is één van Malta's grootste uitdagingen om zich zo te ontwikkelen dat de schaarse grond zoveel mogelijk gehandhaafd blijft. Er bestaat een zeer hoge waarschijnlijkheid in Malta dat het Europees beleid tijdens het lokale implementatieproces weinig wordt aangepast aan de lokale omstandigheden waardoor er ruimtelijke "misfits" kunnen optreden. Eén reden waarom dat waarschijnlijk is, is dat Malta het Europees beleid niet of heel weinig heeft beïnvloed. Malta is pas 2004 tot de EU toegetreden en een groot deel van de Europese maatregelen zijn zonder consensus van Malta tot stand gekomen. Eén andere reden is dat Malta slechts twee bestuurslagen heeft, namelijk op nationaal en op lokaal niveau. De lokale bestuurslaag werd pas geïntroduceerd op het moment dat Malta zich voorbereidde op de toetreding tot de EU in 1993. Ondanks de introductie van deze lokale bestuurslaag wordt het bestuur in Malta nog steeds gekenmerkt door een gecentraliseerde structuur. Met andere woorden, als het EU-beleid daadwerkelijk ruimtelijke "misfits" veroorzaakt op lokaal niveau, dan zullen deze in Malta met hoogst mogelijke zekerheid geïdentificeerd kunnen worden.

In deze studie is enerzijds onderzocht of er sprake is van ruimtelijke "misfits" tussen het Europees beleid en de lokale karakteristieke kenmerken van de plaats op Malta waar het EU-beleid geïmplementeerd dient te worden. Anderzijds is onderzocht of, zo er al sprake is van dergelijke misfits, het grootschalig EU-beleid dan kan worden aangewezen als hoofdoorzaak voor deze "misfits". Hier heeft de keuze voor Malta ook een speciale reden. Omdat Malta slechts twee bestuurslagen heeft die verregaand ook nog deel uitmaken van slechts één politiek proces, is de bestuurlijke buffer tussen EU beleid uit "Brussel" en de implementatie van maatregelen "op de grond" in het geval van Malta kleiner dan in welke andere EU lidstaat dan ook. Daardoor kan hier de redenering gelden dat wanneer zelfs op Malta de misfits niet (geheel) aan het EU beleid

kunnen worden toegeschreven, dat elders in de EU nog onwaarschijnlijker zal zijn. Door de bijzondere geografische en staatkundige omstandigheden kan Malta worden gezien als een soort vergrootglas waardoor de ruimtelijke invloed van het grensoverschrijdende en niet op de plaats toegesneden Europees beleid op lokaal niveau beter kan worden waargenomen.

Onderzoeksvragen

Dit onderzoek heeft twee invalshoeken. Ten eerste, het focust op het ruimtelijke aspect, de plaatselijke effecten van het EU beleid dat op lokaal niveau geïmplementeerd wordt. Ten tweede, het analyseert de beleidsimplementatieprocessen en de rol van de belangrijkste actoren in de verschillen bestuurslagen, EU, nationaal en lokaal. In hoofdstuk een van de dissertatie worden de twee onderzoeksvragen geïntroduceerd:

In hoeverre doen zich ruimtelijk "misfits" voor tijdens de implementatie van het Europees beleid op lokaal niveau op Malta?

In hoeverre worden de mogelijke ruimtelijke "misfits" veroorzaakt door het groot-schalige Europees beleid of door het binnenlandse multi-actor implementatie-proces op Malta?

Het doel van dit onderzoek is nieuwe kennis te genereren over ruimtelijke "misfits" in plaatselijke implementatieprocessen. De kennis van de studie kan bijdragen aan een betere coördinatie van de verschillen bestuurslagen tijdens het implementatieproces en een betere afstemming van het EU beleid. Bovendien kan deze ook meer specifiek bijdragen aan een grotere aandacht voor Malta's ruimtelijke bijzonderheden. De wetenschappelijke relevantie is erin gelegen dat de onderzoeksresultaten gebruikt kunnen worden voor ander implementatie onderzoek. Het concept van de plaats in combinatie met het theoretisch kader, kunnen vertaald worden naar andere toepassings-gebieden.

Onderzoeksopbouw

Dit proefschrift is verdeeld in zes hoofdstukken. In het eerste hoofdstuk worden de probleemstelling en de specifieke situatie op Malta en de beleidsstructuur ter plaatse beschreven. In het tweede hoofdstuk wordt nader ingegaan op het theoretische kader en de onderzoeksmethodologie. Het theoretisch kader voor dit onderzoek is afkomstig uit de beleidswetenschap (paragraaf 2.6). Hierbij is gekozen voor een theorie van de derde generatie over beleidsimplementatie: de Contextuele Interactie Theorie. Hierin wordt beleids-implementatie beschouwd als een dynamisch interactieproces tussen de betrokken actoren. De actoren kunnen elkaar hinderen en het proces belemmeren. Het interactieproces wordt enerzijds beïnvloed door actoren en hun drie voornaamste kenmerken en omgekeerd hebben ervaringen die tijdens het proces worden opgedaan weer invloed op deze actorkenmerken. Deze kenmerken zijn de motieven van actoren, hun cognities en macht en capaciteit, zoals hulpbronnen die ze tot hun beschikking hebben of juist niet. Verder zijn niet alleen de actoren zelf van belang, maar ook de context van het implementatieproces. De actoren worden namelijk beïnvloed door de

bredere context, de structurele context, en de specifieke context van het implementatieproces.

Om de ruimtelijke "misfits" te kunnen analyseren, is het theoretisch kader aangepast en het concept van de plaats geïntroduceerd in de oorspronkelijke Contextuele Interactie Theorie. De plaats is een belangrijk concept in de geografische literatuur (paragraaf 2.2). Uit de literatuuranalyse kan geconcludeerd worden dat de plaats ten minste vier kenmerken heeft: grenzen, functies, natuur en waarden. Deze kenmerken creëren een specifieke beleids-implementatie context. In paragraaf 2.7 wordt de methodologie van dit proefschrift verder uitgelegd. In deze samenvatting wordt deze kort in de volgende paragraaf onder de titel onderzoeksmethode samengevat.

In de hoofdstukken drie tot met vijf worden de drie beleidsvelden met daarbinnen vijf casussen bestudeerd. In hoofdstuk drie wordt de implementatie van het beleid inzake het Trans-Europees Transportnetwerk (TEN-T) in Malta geanalyseerd. Met dit doel zijn er twee casussen bestudeerd, namelijk het Manikata ringwegproject VIII en het Ghadira baai moderniseringsproject X. Het hoofdstuk begint met een korte introductie van het algemene Europees TEN-T beleid en van Malta's nationale beleid. Hierna worden de projecten Manikata en Ghadira nader omschreven. Vervolgens worden de ruimtelijke "misfits" geanalyseerd. De focus ligt hierbij op de vier kenmerken van de plaats en op het beleidsimplementatieproces.

Hoofdstuk vier is gewijd aan de implementatie van het Europees energiebeleid voor hernieuwbare energieën in Malta. Net als in hoofdstuk drie is ook deze analyse gebaseerd op twee casussen, namelijk op het geplande windpark Sikka l-Bajda, en op het geplande windpark Wied Rini L/O Bahrija. Het hoofdstuk begint met een overzicht van het energiebeleid van Malta inzake hernieuwbare energiebronnen, zowel vóór als na de toetreding tot de EU. In Malta's energiebeleid wordt het belang van windparken benadrukt. Beide projecten zijn vanuit het theoretisch kader bestudeerd. Ook hier is daarbij vooral gekeken naar de ruimtelijke "misfits" en het beleidsimplementatieproces.

In hoofdstuk vijf wordt de implementatie van het Europees aquacultuurbeleid in Malta beschreven. In tegenstelling tot de andere beleidsvelden bevat dit laatste casushoofdstuk slechts één casus. In dit hoofdstuk wordt de implementatie van een aquacultuurzone in het zuidoosten van Malta geanalyseerd. In de inleiding wordt Malta's aquacultuurbeleid van voor en na de toetreding tot de EU verkend. Op basis van het theoretisch kader zijn ook in deze casus de kenmerken van de plaats en het implementatieproces van het beleid onderzocht. Het laatste hoofdstuk zes sluit dit proefschrift af met de belangrijkste resultaten en de conclusie. De volgende paragraaf van deze samenvatting licht kort de onderzoeksmethode van dit proefschrift toe.

De onderzoeksmethode

Om de onderzoeksvragen te kunnen beantwoorden, is er gekozen voor een onderzoek op basis van empirische casussen. Er is bewust gekozen voor Malta, omdat er in dit EU land naar alle waarschijnlijkheid sprake zou zijn van ruimtelijke "misfits" bij de implementatie van Europees beleid op lokaal niveau. Vanwege de zeer specifieke situatie op Malta voor wat betreft het lokale implementatieproces van het Europees beleid, kan worden verondersteld dat als er in dit land geen ruimtelijke "misfits" kunnen worden geïdentificeerd, deze zich naar alle waarschijnlijkheid ook niet vaak in andere EU-lidstaten zullen voordoen. Bovendien kan worden verondersteld dat als in dit land er geen dominante EU invloed op het ontstaan van misfits is, zulke invloed elders nog

onwaarschijnlijker is. In paragraaf 2.7 van dit proefschrift worden de redenen voor de keuze voor Malta en de diverse casussen gedetailleerd uiteengezet. Bij de keuze voor Malta speelden onder meer de volgende factoren een rol. In de eerste plaats wordt door Malta's gecentraliseerde beleidsstructuur en de twee bestuurslagen het Europees beleid bijna direct op het lokale niveau uitgevoerd. In de tweede plaats is door Malta's geografische grootte het aantal belangrijke actoren en de grootte van de organisaties die bij het implementatieproces betrokken zijn zeer beperkt. Dat is een praktische reden voor het onderzoek in Malta.

Hoewel Malta uniek is in de EU met betrekking tot de geografische omvang van het land, de buitengewoon hoge bevolkingsdichtheid en de hoge graad aan bebouwde gebieden, dient dit onderzoek geenszins beschouwd te worden als een enkelvoudige casus. De eerder genoemde vijf casussen binnen Malta zorgen voor een verbetering van de validiteit van het onderzoek.

Het gebruik van de Contextuele Interactie Theorie als het theoretisch kader maakt het mogelijk om belangrijke sleutelfactoren te inventariseren die het optreden van de ruimtelijke "misfits" beïnvloeden. Een belangrijke theoretische vooronderstelling is dat het implementatieproces uit verschillende sociale interactieprocessen tussen de belangrijkste actoren bestaat, die ook beïnvloed worden door hun karakteristieken (motivatie, cognities, macht en capaciteit). Dit creëert een casus-specifieke dynamiek tussen de bestuurslagen die weer de uitkomst van het implementatieproces beïnvloedt. Met andere woorden, het EU-beleid (de onafhankelijke variabele), leidt niet direct tot de ruimtelijke "misfits" (de afhankelijke variabele).

Voor de verzameling van de gegevens waren twee bronnen van belang. Allereerst zijn aan de hand van documenten uit de vier belangrijkste Engelstalige kranten op Malta de projecten per casus gereconstrueerd. Een tweede belangrijke databron werd gevormd door de persoonlijke, semigestructureerde interviews en door de directe observaties van de onderzoeker. De geïnterviewde personen zijn geselecteerd op basis van hun betrokkenheid bij het implementatieproces. Daarna hielpen telefonische interviews en e-mails de informatie te verduidelijken, te controleren en ontbrekende informatie aan te vullen. De analyse van de gegevens is gebaseerd op een inhoudsanalyse. Hierbij werd gebruik gemaakt van de kwalitatieve data-analyse software NVivo. Met behulp van dit programma zijn de gegevens gestructureerd en zijn de data in alle vijf casussen op dezelfde manier gecodeerd, teneinde consistentie in de inhoudsanalyse te bereiken.

Om vast te stellen of er ruimtelijke "misfits" aanwezig zijn in het beleidsimplementatie-proces, zijn de beleidsmaatregelen en de vier kenmerken van de plaats vergeleken. Concrete projecten, zoals een windpark kennen een plaats die beschouwd kan worden met behulp van de vier onderscheiden kenmerken van de plaats (de grenzen, de natuur, de belangrijke functies en de culturele en andere waarden). Ruimtelijke "misfits" werden geconstateerd als het beleid de bestaande kenmerken van een plaats helemaal negeert, nieuwe karakteristieken toevoegt aan een plaats die de oude verdringen en/of de kenmerken van een plaats helemaal anders interpreteert. In sommige gevallen was het beleid niet helemaal eenduidig. In deze gevallen kwamen de grenzen van de plaats bijvoorbeeld slechts gedeeltelijk overeen met de grenzen van het project of werden de waarden van een plaats gedeeltelijk anders geïnterpreteerd. In zulke gevallen werd slechts een gedeeltelijke ruimtelijke "misfit" geconstateerd.

De onderzoeksresultaten

In deze paragraaf worden de belangrijkste onderzoeksresultaten van alle vijf casussen gepresenteerd. Het belangrijkste resultaat in antwoord op de eerste onderzoeksvraag is dat er in alle vijf casussen sprake is van ruimtelijke "misfits" tussen het Europees beleid en de plaats waarin het geïmplementeerd moet worden. De meeste ruimtelijke "misfits" zijn geconstateerd op het gebied van de ruimtelijke grenzen. Zo zorgen de onderzochte beleidsmaatregelen bijvoorbeeld voor wijzigingen van plaatselijke gebruikersrechten zonder toestemming van de gebruikers en voor nieuwe grenzen die een versnippering van beschermde natuurgebieden tot gevolg zullen hebben. De analyse van de functies van de plaats toont aan dat er ook op dit vlak ruimtelijke "misfits" optreden, maar niet zo vaak als bij de ruimtelijke grenzen. De geanalyseerde beleidsmaatregelen wijzigen of verwijderen zelden alle functies van een plaats. Bovendien blijkt uit de analyse dat veel functies flexibeler zijn dan de plaatselijke grenzen en daardoor makkelijker aan nieuwe situatie aangepast kunnen worden. Er kan geconcludeerd worden dat zolang beleidsmaatregelen een meervoudige functionaliteit van de plaats toelaten, ruimtelijke "misfits" met betrekking tot de functies kunnen worden voorkomen.

Met betrekking tot de natuur, een andere kenmerk van de plaats, zijn ruimtelijke "misfits" van de beleidsmaatregelen op dit vlak net zo talrijk als bij de functies. Aangezien de meeste onbebouwde plaatsen in Malta natuur en recreatiegebieden zijn, hebben beleidsmaatregelen die een fysieke invloed hebben heel vaak een effect op de natuur. Uit de analyse is gebleken dat ruimtelijke "misfits" van beleid en natuur een belangrijke factor vormen bij de uitvoering van het beleid. Eén ander kenmerk van de plaats zijn de waarden. Waarden vloeien niet per se voort uit de geografische ligging van de plaats, maar mensen hechten bepaalde waarden aan een plaats. Uit de analyse blijkt dat de meeste ruimtelijke "misfits" met betrekking tot de waarden ontstaan omdat de beleidsmaatregelen geen extra nut opleveren voor de gebruikers en voor potentiële gebruikers van een plaats. Bovendien geven de gebruikers en de belanghebbenden van een plaats een hoge prioriteit aan de natuurlijke waarde van een plaats en het landschap. Veel Maltezers hebben sterke morele bedenkingen bij de vernietiging van de natuur, omdat het natuurlijk erfgoed dan niet doorgegeven kan worden aan volgende generaties. Tevens zijn veel gebruikers van een plaats persoonlijk zeer gehecht aan een plaats. De analyse toont aan dat in alle vijf casussen de waarden, net als de grenzen van een plaats moeilijk te veranderen en te vervangen zijn.

Uit de vergelijking van alle casussen is gebleken dat de meeste ruimtelijke "misfits" zich voordoen in de twee transportcasussen. In die casussen was het Europees beleid het meest concreet, door de cofinanciering van de projecten en een tijdschema. De vergelijking laat ook zien dat in deze casussen met de meeste ruimtelijke "misfits", zich de meeste problemen tijdens het implementatieproces hebben opgedaan. Dit heeft mede ervoor gezorgd dat uiteindelijk het implementatieproces gestopt werd. Betekent dit dat het Europees beleid altijd de belangrijkste factor is in het ontstaan van ruimtelijke "misfits"? Nee, maar de analyse liet wel zien dat door de betrokkenheid van de EU, de kenmerken van de belangrijkste actoren werden beïnvloed: de motivatie, de cognities en de hulpbronnen.

Toch is het nationale interactieproces van de belangrijkste actoren beslissend voor het ontstaan van en voor de omgang met de ruimtelijke "misfits". De gecentraliseerde structuur van het bestuur heeft bijvoorbeeld tot gevolg dat niet-gouvernementele actoren

systematisch buitengesloten werden van het implementatieproces. Hierdoor werd wederzijds begrip en de aanpassing van het Europees beleid aan de ruimtelijke en plaatselijke gegevens bemoeilijkt. Bovendien leidt de communicatie van actoren via de media bijvoorbeeld ook tot wederzijds onbegrip en wantrouwen.

Conclusie

De uiteindelijke conclusie van het proefschrift moet luiden dat ruimtelijke "misfits" niet uitsluitend veroorzaakt worden door het Europees beleid, maar dat het Europees beleid wel ruimtelijke "misfits" kan uitlokken of de kans erop kan vergroten. Dat neemt niet weg dat vervolgens de ruimtelijke "misfits" wel door de binnenlandse implementatie-processen worden veroorzaakt en niet door Europa worden afgedwongen

Uit het onderzoek is gebleken dat vooral lokale doelen en belangen van invloed zijn op de beleidsvorming en op de plaatselijke uitvoering in de Europese lidstaten. Ook zijn het Europees beleid en de Europese wetten op zichzelf niet krachtig genoeg om de uitvoering van concrete projecten te bepalen. Het Europees beleid beïnvloedt wel de kenmerken van de belangrijkste actoren, waardoor het invloed heeft op de nationale en lokale implementatie-processen en de uitkomst. Met name de tijdsdruk van de EU bij de beschikbaarheid van cofinanciering voor bepaalde beleidsdoelstellingen, dwingt de nationale overheden binnen een bepaald tijdbestek te handelen als zij deze financiële middelen voor hun land willen "binnenhalen". Dit leidt, in combinatie met een hiërarchische en gecentraliseerde beleidsstructuur zoals op Malta, waar relatief weinig "checks and balances" en buffercapaciteit aanwezig zijn, tot ruimtelijke "misfits". Ruimtelijke "misfits" kunnen worden gezien als signalen aan de actoren die bij het implementatieproces betrokken zijn dat het beleid of de wijze van uitvoering aangepast dient te worden aan de plaatselijke situatie. Deze aanpassing vraagt tijd terwijl de tijdsdruk die wordt opgelegd door de EU juist de kans vergroot de kans dat beleid niet aangepast wordt of niet geïmplementeerd wordt.

About the author

Julia R. Kotzebue holds a Master degree in International Relations and International Organizations from the Rijksuniversiteit Groningen in the Netherlands. Her master thesis *Sustainable Development Policy: The case of Malta*, investigates the sustainable principles of transparency, responsibility, accountability, participation and responsiveness in Malta's land use planning.

Julia joined the CSTM – the Twente Centre for Studies in Technology and Sustainable Development at the University of Twente in the Netherlands as a junior researcher in 2007. At CSTM Julia engaged in several European research projects, like Gfors (Governance for Sustainability) and SAUCE (Schools at University for Climate and Energy). She cooperated with colleagues from Universities and Research Institutes in Germany, Greece, Hungary, Italy, Norway, Poland, Sweden, Great Britain, Denmark and Latvia.

Appendix

EU Directives and regulations with regard to renewable energy and energy saving and the establishment of the Trans European Energy Networks Networks

Renewable energy

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport.

Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market.

Energy Efficiency

Energy labelling of Domestic Appliances
Council Directive 92/75/EECof 22 September 1992 on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances and its amendments and implementing measures ("Energy Labelling Directive")
repealed by:

Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (recast).

Regulation (EC) No 106/2008 of the European Parliament and of the Council of 15 January 2008 on a Community energy-efficiency labelling programme for office equipment (Energy Star).

2006/1005/EC: Council decision of 18 December 2006 concerning conclusion of the Agreement between the Government of the United States of America and the European Community on the coordination of energy-efficient labelling programmes for office equipment.

Commission decision 2003/168/EC of 11 March 2003 establishing the European Community Energy Star Board.

Regulation (EC) No 2422/2001 of the European Parliament and of the Council of 6 November 2001 on a Community energy efficiency labelling programme for office equipment.

Regulation (EC) N° 1222/2009 of the European Parliament and of the Council of 25 November 2009 on the labelling of tyres with respect to fuel efficiency and other essential parameters.

Commission Delegated Regulation (EU) No 1059/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household dishwashers.

Commission Delegated Regulation (EU) No 1061/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household washing machines.

Commission Delegated Regulation (EU) No 1062/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of televisions.

Commission Delegated Regulation (EU) No 1060/2010 of 28 September 2010 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of household refrigerating appliances.

Commission Delegated Regulation (EU) No 626/2011 of 4 May 2011 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of air conditioners.

Eco-design of Energy-Using Products
Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005, as amended by Directive 2008/28/EC of the European Parliament and of the Council of 11 March 2008, establishing a framework for the setting of eco-design requirements for energy-using products and amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council ("Eco-design Directive"), replaced by:

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of eco-design requirements for energy-related products (recast).

Commission Regulation (EU) No 327/2011 of 30 March 2011 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to eco-design requirements for fans driven by motors with an electric input power between 125 W and 500 kW.

Commission Regulation (EU) No 1015/2010 of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to Eco-design requirements for household washing machines.

Commission Regulation (EU) No 1016/2010 of 10 November 2010 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to eco-design requirements for household dishwashers.

Commission Regulation (EC) No 641/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for glandless standalone circulators and glandless circulators integrated in products.

Commission Regulation (EC) No 640/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for electric motors.

Commission Regulation (EC) No 643/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for household refrigerating appliances.

Commission Regulation (EC) No 642/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for televisions.

Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for no-load condition electric power consumption and average active efficiency of external power supplies.

Commission Regulation (EU) No 347/2010 of 21 April 2010 amending Commission Regulation (EC) No 245/2009 as regards the eco-design requirements for fluorescent lamps without integrated ballast, for high intensity discharge lamps, and for ballasts and luminaires able to operate such lamps.

Commission Regulation (EC) No 859/2009 of 18 September 2009 amending Regulation (EC) No 244/2009 as regards the eco-design requirements on ultraviolet radiation of non-directional household lamps.

Commission Regulation (EC) No 244/2009 of 18 March 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for non-directional household lamps.

Commission Regulation (EC) No 245/2009 of 18 March 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for fluorescent lamps without integrated ballast, for high intensity

discharge lamps, and for ballasts and luminaries able to operate such lamps, and repealing Directive 2000/55/EC of the European Parliament and of the Council.

Commission Regulation (EC) No 107/2009 of 4 February 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for simple set-top boxes.

Commission Regulation (EC) No 1275/2008 of 17 December 2008 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment.

End-use Efficiency & Energy Services
Directive 2006/32 of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC ("The Energy Services Directive").

Energy Efficiency in Buildings

Directive 2002/91 of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings and its amendments repealed by its recast directive:

Directive 2010/31 of the European Parliament and of the Council of 17 May 2010 on the energy performance of buildings and its amendments (the recast Directive entered into force in July 2010, but the repeal of the current Directive will only take place on 1/02/2012).

Cogeneration - Combined Heat and Power (CHP)

Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC of 21 May 1992 on efficiency requirements for new hot-water boilers fired with liquid or gaseous fuels 68. Commission Decision (notified under document number C(2006) 6817) of 21 December 2006 establishing harmonised efficiency reference values for separate production of electricity and heat in application of Directive 2004/8/EC of the European Parliament and of the Council.

Commission Decision (notified under document number C(2008) 7294) of 19 November 2008 establishing detailed guidelines for the implementation and application of Annex II to Directive 2004/8/EC of the European Parliament and of the Council.

Trans European Energy Networks

Regulation (EC) 67/2010 of the European Parliament and of the Council of 30 November 2009 laying down general rules for the granting of Community financial aid in the field of trans-European networks (codified version).

Regulation (EC) No 680/2007 of the European Parliament and of the Council of 20 June 2007 laying down general rules for the granting of Community financial aid in the field of the trans-European transport and energy networks (TEN Financial Regulation).

Decision No 1364/2006/EC of the European Parliament and of the Council of 6 September 2006 laying down guidelines for trans-European energy networks and repealing Decision 96/391/EC and Decision No 1229/2003/EC.